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ABSTRACT

Spanish/English bilingualism, grade-level academic achievement, and ethnic pride remained the goals of the bilingual education program in its second year of operation. A number of positive outcomes justify its continued operation and vertical expansion. Specific recommendations are made for continuation of staff training, development of bilingual curricula, improvements in the instructional process, and strengthening of the school-home relationship. (AG)

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BILINGUAL EDUCATION PROGRAM

EVALUATION REPORT
1970 · 1971

TM 001 014

DIVISION OF PLANNING AND
LONG-RANGE DEVELOPMENT

DEPARTMENT OF EDUCATIONAL RESEARCH
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1970-1971

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Evaluation Report

Milwaukee Bilingual Education Program

1970 - 1971

An Abstract

MILWAUKEE PUBLIC SCHOOLS
Milwaukee, Wisconsin

ABSTRACT

Spanish/English bilingualism, grade-level academic achievement, and ethnic pride remained the goals of the Milwaukee Bilingual Education Program in 1970-1971, its second year of operation. The program was initiated in 1969-1970 as a five-year program in selected classes in four schools. At the end of the first year, program pupils, who had been taught in both English and Spanish, learned to read both languages, but averaged lower than their English-only schoolmates on standardized achievement tests of reading and mathematics skills in English. Parents indicated satisfaction with the emphasis on Latin-American culture and the bilingual curriculum. The planned addition of one grade level per year at each school resulted in a total enrollment of 359 in 1970-1971. At the elementary level, the program served 166 pupils in kindergarten through grade two at Vieau School and grades one through three at Bruce-Guadalupe Community School. Secondary students served totaled 193 enrolled in "Hispano-American Culture, Language, and History", "United States History", and classes in English reading at Lincoln Jr-Sr High School and South Division High School.

Both English and Spanish were used in teaching and as the language of the classroom. All 18 teachers and aides were bilingual, all but three were Latin-Americans. Two paraprofessional bilingual Latin-American student advisors and one community liaison person assisted secondary students and maintained contact with parents. Supervisory and teaching staff adapted curricula for bilingual presentation and created components to meet special needs of Latin-American pupils.

At the elementary level, pupils demonstrated the ability to understand vocabulary and phrases associated with curriculum subjects in both English and Spanish. In contrast to last year, bilingual kindergarten pupils had greater readiness skills for first grade, according to outcomes of the Metropolitan Readiness Tests. Bilingual first graders were on about the same academic level as their peers. Bilingual second graders fell behind the regular class in English language skills and math achievement on the Cooperative Primary Tests. Both Spanish-dominant pupils and those English-dominant pupils who reached Level 5 in English reading skills learned to read Spanish. Pre-post gains were made in Spanish reading at the first grade level, but not in second or third grade.

Secondary students in the reading classes gained nearly one grade level in pre-post Nelson Reading Test scores to fourth grade equivalents at Lincoln and sixth at South Division. Students reported that attendance at bilingual classes resulted in better overall school work, feelings of cultural pride, skills in speaking Spanish, and contact with empathetic teachers.

Parents reported that their children liked school better, improved in their studies, had increased pride in their heritage, and spoke Spanish more often. Parents themselves had more frequent contact with school and indicated approval of the Spanish report card and the program newsletter.

Community involvement was altered considerably. Lincoln High School parents formed their own advisory committee through the Puerto Rican Center. Bruce-Guadalupe Community School withdrew from the program at the end of the year.

A number of positive outcomes justify the continued operation and vertical expansion of the program. Specific recommendations were made for the continuation of staff training, development of bilingual curricula, improvements in the instructional process, and strengthening of the school-home relationship.

MILWAUKEE PUBLIC SCHOOLS
Milwaukee, Wisconsin

Evaluation Report

Milwaukee Bilingual Education Program

1970 - 1971

Division of Planning and
Long-Range Development

Department of Educational Research
and Program Assessment

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INTRODUCTION

The Milwaukee Bilingual Education Program was initiated in 1969 in response to the unique needs of an estimated 9,000 or more Latin-Americans. The Spanish-heritage population is a minority within a central city area of about 17 square miles inhabited by a total 123,838 individuals. The industrial Menomonee River Valley bisects the area from east to west. The remainder is a residential-commercial-industrial mix.

Within the area, Spanish-Americans from Puerto Rico have settled mostly to the north of the Valley. Mexican-Americans, the majority, reside south of the Valley. Some have been Milwaukeeans since World War II. The recent settlers are mainly migrants from the southwestern states or immigrants from Mexico.

Milwaukee's Latin-American population has increased at least 33% since the count of 6,000 in the 1960 U.S. census, and the cultural impact has influenced the city's character.

The United Migrant Opportunity Service predicted that an additional 225 families will settle in the target area by December, 1971. Of these, 125 families will be migrant agricultural workers who will spend the summer in Wisconsin fields.

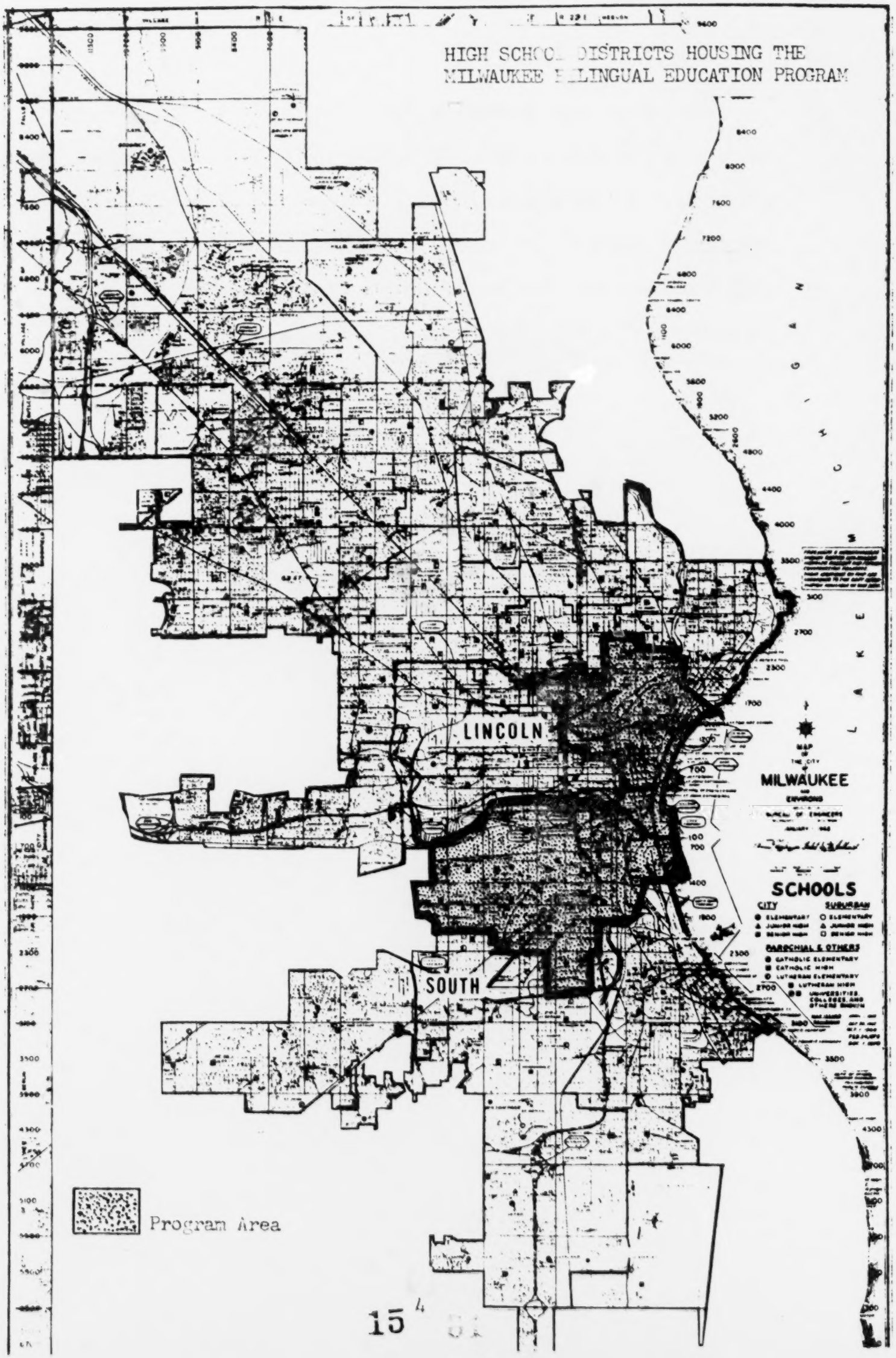
Most Latin-American workers are employed in factories and foundries. According to the Wisconsin State Employment Service, Milwaukee's jobless total in March, 1971, was 34,000. Twenty thousand were from the inner city. The Latin-American-directed Concentrated Employment Service predicted a 1.6% increase in unemployment by June, 1971, reflecting the entrance of students and returning veterans to the labor market.

Many Spanish-American families who had resided for generations in what is now the southwestern United States have maintained their ancestral language and customs. On the other hand, many urban families of Spanish descent who have been "Americanized" are returning to traditional language and customs in a movement which stresses their Latin-American heritage. Spanish-speaking parents want their children to learn English in order to avail themselves of maximum opportunities for achievement. The "English as a Second Language Program" could help them there. But an "English only" education has made learning difficult for those whose mother tongue is Spanish, and has discouraged the learning of the Spanish language and culture for children whose mother tongue is English.

In an attempt to remove these barriers to learning, the Latin-American community and the school system jointly designed a bilingual program. It was believed that a bilingual curriculum, staffed by bilingual Spanish-Americans, could elevate pupils to grade-level achievement and promote ethnic pride.

In 1970-1971, three percent (3,898) of the Milwaukee Public Schools pupil population was designated "Spanish and Puerto Rican Surnamed." Of these, seven and one-half percent (300) participated in the study in one south side elementary school and two high schools. An additional 59 pupils were in the program at a community school near the elementary school.

The map on page 4 indicates the two high school districts which include the project schools. According to the 1970 U.S. census, 96,653 people live in the area outlined. Of these, 30,455 people (69% white, 30% Negro) reside in the Lincoln Jr-Sr High School district north of the industrial valley. The South Division High School district has a population of 66,198 (99% white).


HIGH SCHOOL DISTRICTS HOUSING THE
MILWAUKEE BILINGUAL EDUCATION PROGRAM
LINCOLN
SOUTH
MILWAUKEE
SCHOOLS
CITY
SUBURBAN
PAROCHIAL & OTHERS
Program Area

PROGRAM DESCRIPTION

Scope

The bilingual program was initiated in September, 1969, to provide curricula in both Spanish and English. All instruction was to be in both languages. Long-range goals were attainment of grade-level achievement, Spanish/English bilingualism, and cultural pride.

During the first year a total of 256 pupils participated. Bilingual classes included one kindergarten and one first grade at Vieau School; the first and second grade of Bruce-Guadalupe Community School; two classes in "Hispano-American Culture, Language, and History" at Lincoln and South Division High Schools; and a reading class at South Division during the second semester. A native-born Latin-American paraprofessional served as student advisor to Spanish pupils at both high schools. All teaching staff members were bilingual, most were Latin-Americans. At the elementary level, bilingual aides assisted in each classroom and a supervising teacher rotated among the classrooms. The first year was a period of developmental trial and error, resulting in operational bases for continuation and expansion.

In 1970-1971, the program expanded by one grade level at each elementary school, permitting first year pupils to progress and new pupils to enter. Bilingual "United States History" and several reading classes were added at both high schools. A total of 359 pupils were reported enrolled in academic classes at various times. In addition, the program served Latin-American students who sought help from the student advisors and parents of project pupils.

Personnel

Elementary classrooms, grades k-2 at Vieau and 1-3 at Bruce-Guadalupe, each had a teacher and an aide. A team teacher at each school worked full time with ungraded Spanish or English reading and math groups. Each high school had a social studies teacher and reading specialist. Lincoln had one and South Division had two non-certificated bilingual student advisors. A supervising teacher assisted the project director in coordinating the program. One non-certificated community liaison person made home visits. All staff members were bilingual and all but the three teachers at Bruce-Guadalupe Community School were Latin-Americans.

The Milwaukee Public Schools curriculum specialist, foreign languages, was the project director. The evaluator was a member of the Department of Educational Research and Program Assessment. Part-time testers, one with a master's degree in Spanish, assisted with the evaluation.

An advisory committee of parents and community members made policy and personnel recommendations through the project director.

Program management, process and evaluation were monitored by an audit team of five curriculum experts of the Wisconsin State Department of Public Instruction and a University of Wisconsin professor of the Department of Educational Psychology.

Program Operation

In August, 1970, program personnel attended a two-week pre-service training workshop for orientation and curriculum planning. Curriculum specialists from the Milwaukee Public Schools Department of Elementary and Secondary Education and a consultant from Mount Mary College helped give direction to the pre-service workshop and six in-service workshops

during the year. Together with the staff, they specified the behavioral objectives which guided the educational program. The creation of a bilingual curriculum required an ongoing search for Spanish materials, English to Spanish translations and guidelines for teaching in a dual-language framework. Compounding the challenge of a bilingual curriculum was the Puerto Rican-Mexican ethnic mixture, each possessing a distinctive culture and vernacular. During the year, objectives and processes were modified as indicated by experience with the innovative program, evaluation outcomes, advisory committee recommendations, and audit team recommendations.

The thrust of the program at the elementary level was to provide a bilingual basic school curriculum which would enable pupils to reach grade-level achievement in all subjects and to acquire fluency in both English and Spanish by the end of grade six. Time and space were reorganized to accommodate team teaching of reading and math in ungraded ability groups divided according to dominant language. During the year, a resource center for program information and bilingual materials was established in the Vieau School library, and a Spanish report card was developed for parents who wished it.

Secondary level objectives aimed to promote cultural pride, to provide language skills enabling achievement in the regular curriculum, and to motivate students to remain in school and graduate. During the year, an expert addressed bilingual high school students on drug addiction.

The first two issues of a "Bilingual Bulletin" were distributed to inform parents and community about the program.

Funding for the 1970-1971 program was provided by Title VII and

Title I of the Elementary and Secondary Education Act of 1965, as amended in 1967, and by the Milwaukee Public Schools. The total budget for the project was $130,118.

GOALS

Fourteen long-range goals were defined by the project director in the original bilingual program proposal. The goals are:

— To develop a bilingual readiness in Spanish-speaking and English-speaking children.

— To stimulate Spanish-speaking children to understand and communicate in English.

— To cultivate in Spanish-speaking pupils a pride in their native language and culture and a more positive self-image as they make the transition to another culture and language.

— To enable Spanish-speaking and English-speaking pupils, by the end of Grade 6, to achieve such general proficiency that they can pursue their studies with about equal ease in English and Spanish.

— To promote in the English-speaking children a personal awareness and respect for the cultural values of the Spanish-speaking people.

— To motivate English-speaking children to communicate in Spanish and to develop the skills needed to do so.

— To enable English-speaking pupils to achieve sufficient skills in Spanish so that at the end of Grade 6 they will attain Level 1 proficiency.

— To enable the pupils in the above classes to progress in school with minimal retention so that by the end of Grade 6 they will reach grade-level achievement in all their subjects.

— To promote mutual understanding and respect between the Spanish-speaking pupils and the English-speaking pupils through interaction as they help with each other's language.

— To increase the Spanish-speaking pupil's self-concept and pride in his own cultural background at the same time he is learning to appreciate and esteem a new culture.

— To foster in the English-speaking pupils an appreciation of the contributions of the Spanish-speaking pupils.

— To increase the newly-arrived Spanish-speaking pupil's confidence by providing him with a content course which he can immediately understand.

— To motivate parents to become more involved in the educational

process and to become more aware of communication channels that exist between home and school.

-- To help teachers, principals, and counselors better understand and appreciate their Spanish-speaking pupils' potential and their cultural background.

OBJECTIVES

The goals of grade-level achievement and development of ethnic pride within a bilingual curriculum guided specifications of performance objectives for each level. Objectives for the second funding period were stated mainly by the supervisory staff. Input of the teaching staff was included in the modifications which reflect a consensus reached at the in-service workshops. The objectives are listed below in condensed form. They are repeated along with criteria, process, and evaluative procedures and findings in the section titled "Assessment and Results".

Pupil Objectives

Elementary:

Kindergarten and primary pupils will be able to understand and orally use the basic Spanish and English language patterns and vocabulary related to subject content areas in mathematics, science, and social studies.

Kindergarten and primary pupils will perform equally well on achievement tests in mathematics, social studies, and science, given oral instructions in English or Spanish.

Kindergarten and primary pupils will achieve levels specified in the Continuation Proposal in aural/oral skills in their first and second languages.

Kindergarten and primary pupils will achieve levels specified in the Continuation Proposal in reading skills in their first and second languages.

Kindergarten and primary pupils will respond appropriately to classroom directions and expressions in English and Spanish according to designated grade-level objectives.

Kindergarten and primary pupils whose first language is English will score as high as comparison groups in tests of reading English and reading readiness.

A majority of project pupils will attain grade-level achievement in all subjects by the end of Grade 6.

Project pupils will achieve sufficient skills in Spanish so that at the end of Grade 6 they will attain Level 1 proficiency (the amount of learning that takes place in one year).

Secondary:

Given instructions in either English or Spanish, project pupils in the "Hispano-American Culture, Language, and History" course will respond correctly to at least half of the items on unit and final achievement tests.

Given instructions in either English or Spanish, project pupils in the bilingual "United States History" course will respond correctly to at least half of the items on unit and final achievement tests.

Pupils who have previously completed the tenth grade "Hispano-American Culture, Language, and History" course will average grades of C or better in eleventh grade "United States History" whether or not they remain in the project.

Pupils given special attention by the bilingual reading specialist will show pre-post test gains of at least one reading level.

Pupils will, at the end of the course, be able to understand and orally use both English and Spanish.

Staff Objectives

Elementary:

To develop oral Spanish/English vocabulary and sentence structure patterns for mathematics units by grade level for Grades K, 1, 2, 3.

To develop Spanish/English post-tests in science and social studies by grade-level teams.

To develop Grade 4 bilingual objectives - science, social studies, mathematics, oral Spanish/English, reading Spanish/English.

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To develop a Pre-Reading Orientation Program for the Ginn 360 Series.

To develop audio-visual materials for the Michigan Oral Interdisciplinary Series.

To develop techniques of working as a team.

To acquire the ability to use audio-lingual techniques in teaching a second language.

To provide assistance to the classroom teacher.

To keep parents and community informed of the Milwaukee Educational Program and motivate them to attend Advisory Committee meetings.

Secondary:

To develop unit plans and lesson plans for "Hispano-American Culture, Language, and History".

To develop unit plans and lesson plans for bilingual "United States History".

To develop unit tests in equivalent English/Spanish forms for the Hispano-American and United States History bilingual courses.

To provide a bilingual reading specialist to give help on a regular basis to students with reading difficulties.

To develop a "guide for the bilingual reading specialist" as a guideline for establishment of a program at Lincoln High School.

To identify students with reading problems.

To provide an effective link between school, home, and community.

Parents, Advisory Committee, Community Objectives

The Advisory Committee will make recommendations regarding the staffing and the Continuation Proposal of the bilingual program to the Milwaukee Public Schools through the bilingual education director.

Parents, agencies and community members will become more involved in school and community activities related to the school.

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Parents, agencies and community members will be better informed about services offered by the Milwaukee Public Schools.

Management Objectives

To plan, direct, and supervise the program.

To provide for involvement of school, parents, students, community, elementary and secondary curriculum staffs, and other Central Office staffs.

To coordinate curriculum and instruction and program sequences.

To establish feedback procedures for various program components.

To staff the program components.

EVALUATION POPULATION

About 70% of the total population of the two elementary schools was of Spanish heritage. Table 1 shows the Bilingual Program population and pupil language dominance.

TABLE 1

Population and Language Dominance
Milwaukee Bilingual Education Program
1970-1971

School Group	Number of Pupils	Percent of Language Dominance *E	S	E/S	Unknown
Vieau School, Kindergarten - Grade 2	107	44	50	1	3
Bruce-Guadalupe Community School, Grades 1 - 3	59				
Lincoln Jr-Sr High School	62	24	75		1
South Division High School	131	31	49		20
	359				

* E = English; S = Spanish; E/S = English/Spanish

Vieau pupils were enrolled in bilingual classes by their parents. The regular class at the same grade level and of similar characteristics was the comparison group for each bilingual class, a total of 91 comparison pupils. In September, 1970, at Vieau School the average age of both bilingual and comparison kindergarten pupils was 5.4 years; the bilingual first grade averaged 6.5 years, one month younger than the

regular class; bilingual second graders, at 7.2 years, were half a year younger than peers in the regular class. At Bruce-Guadalupe Community School all pupils in grades one (average age - 6.4 years), two (average age - 7.6 years) and three (average age - 8.4 years) participated.

Population of the two secondary schools was estimated at less than 15% Spanish heritage. Bilingual social studies classes were elective. Students were enrolled in reading classes by teacher referral.

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DATA COLLECTION PLAN

Data were collected for two evaluations:

1) the short-term formative/summative assessment of the 1970-1971 performance objectives, and

2) a longitudinal summative study of the pattern of learning in a bilingual program and its differential effects on pupils. Most comparisons with non-program pupils relate to the longitudinal study.

Computerized data files were developed for taped storage of pupil identification, short-term annual outcomes, and annual scores for the longitudinal study.

A variety of tests and records were collected for the longitudinal aspect of the study, among which were the following:

1) Tests administered by the City-Wide Testing Program and Special Title I Primary School Achievement Testing
   By special arrangement, bilingual classes at Bruce-Guadalupe Community School were included in this testing. Results aided in assessment of the overall goal of grade-level achievement by providing comparison of pupil performance with ESEA, school, and national norms and with matched comparison groups. The following tests are administered annually:

Test	Forms	Grade
Metropolitan Readiness Tests	A or B	Kindergarten
Cooperative Primary Tests	12A or B 23A or B	1-2-3
Cognitive Abilities Test	1 or 2	2
Lorge-Thorndike Intelligence Tests	I	4*-6*-8*-10
Iowa Tests of Basic Skills	3	4*-6*-8
Milwaukee Science Achievement Test	B	6*
Differential Aptitude Test Battery	L	9

Test	Forms	Grade
Tests of Academic Progress (Science, Reading, Math)	I	10
Tests of Academic Progress Serial Survey		12*

* Not used in 1970-1971 bilingual assessment

Pupils who do not understand and/or read English are exempt from the above tests.

2) Guidance Testing Associates' "Tests of Reading Spanish" were approved by the project director and curriculum supervisors for long-term monitoring of improvements in reading Spanish at elementary levels.
   These results also furnished bases for attaching criterion levels to objectives pertaining to Spanish Language Arts. The tests were administered to pupils at their ungraded reading levels.

3) Guidance Testing Associates' "Tests of Reading English", in equivalent and alternate forms of the above, were administered to elementary program pupils for comparison of English/Spanish reading skills.

4) Individual yearly records of pupil test performance were maintained for inclusion in the cumulative record folder kept by the teacher.

5) Demographic data, such as target area characteristics and ethnic population counts, were obtained from the Department of Budget Planning and Fiscal Studies for comparison of the bilingual population with other pupils and with other Latin-American pupils in the Milwaukee Public Schools.

Data collected for the short-term study were used to monitor progress, to establish expected levels of performance, and to assess attainment of criterion-referenced objectives. The short-term aspect of the study included:

1) Pre-post assessment of behavioral objectives specific to curriculum components.

2) Frequent evaluation of specific learning areas to provide feedback on pupil performance.
   Monitoring of progress was provided at the elementary level in oral English language skills and math achievement. Lesson plans were modified on the basis of feedback.

3) Pre-post testing of English reading skills for secondary bilingual reading classes.
   The Nelson Test was selected by the reading teachers.

4) Reports of questionnaires and observations, side effects resulting from cultural or language interactions, and staff, parent, and community outcomes.

Test Administration

Some achievement tests and the city-wide tests were administered by the classroom teacher. English/Spanish tests of oral language and reading were administered by a bilingual tester who is a native speaker of English with a master's degree in Spanish. A second tester assisted with instruments requiring observation and rating of responses. Among tests which were administered by the bilingual tester were the Michigan Oral Language Productive Test, Guidance Testing Associates' Tests of Reading English and Spanish, English/Spanish Language Arts, Classroom Expressions and Directions, and the Nelson Reading Tests.

Testers were trained in the administration of each instrument and wrote a post-test critique of pupil and teacher response with suggestions for improvement.

Data Analysis

Criterion-referenced objectives were assessed in terms of the criteria. Some outcomes were themselves baseline data which will serve as referrents for 1971-1972 outcomes. Studies of reliability and validity were run for non-standardized and locally devised instruments.

For evaluation purposes, program objectives were categorized as pupil objectives, elementary and secondary; staff objectives, elementary and secondary; and parent and community objectives. The behaviors

measured and the outcomes follow. Longitudinal and pre-post results are reported only for those pupils whose data records are complete.

There was no formal assessment of management objectives because all evaluated components reflect, to some extent, management outcomes.

ASSESSMENT AND RESULTS

Primary School Level

Objective 1: "Kindergarten and primary pupils will be able to understand and orally use Spanish and English language patterns and vocabulary related to subject content areas in mathematics, science, and social studies."

Criterion: At the end of the school year, pupils will respond correctly to 70% of the items on the English/Spanish Language Arts Test.

Instructional Process

Instruction was in Spanish and English. Pupils were encouraged to use subject content language bilingually. A mathematics example would be, "What number is this?", "¿Qué número es este?".

Evaluation Procedure

Bilingual familiarity with subject content language patterns was evaluated by an individual verbal test of alternate English/Spanish (Form A) or identical Spanish/English (Form B) questions. Sample items were selected from the project publication, "Spanish Language Arts, Primary Level, K-3", compiled in 1970-1971 of items largely identified by bilingual classroom teachers. Appropriateness of items was validated by obtaining agreement of the project director and the elementary supervising teacher on the item selection.

The English/Spanish Language Arts Test elicited pointing or verbal responses to questions, all but three referring to seven illustrations. The test was administered individually by a bilingual tester. Responses were scored by a rater. The first ten items were given to all pupils.

Second and third graders had ten additional items. Following a successful field test, Form A was given to half of each class and Form B to the remainder.

Findings

All bilingual classes exceeded the 70% criterion level. Results are shown in Table II.

TABLE II

Kindergarten and Primary Pupil Achievement on
Test of English/Spanish Language Patterns
(N=117)

Group	Mean Percent of Items Correct
10-Item Test	
Vieau Kindergarten	71.8
Vieau First Grade	91.4
Bruce-Guadalupe First Grade	89.0
20-Item Test	
Vieau Second Grade	86.5
Bruce-Guadalupe Second Grade	87.5
Bruce-Guadalupe Third Grade	92.5

It was noted that some pupils responded correctly but in the "other" language (Spanish response to a question in English or vice-versa). The proportion of pupils who mixed languages increased by grade level from an average 34% at kindergarten-grade one to 48% for combined second and third grades.

It is predicted that the trend will continue. Language experts on the Audit Team postulated that an increasing tendency to interchange

English and Spanish may indicate progress toward true bilingualism. This interesting side effect will be pursued.

A re-test for reliability was administered to half of the pupils on the following day with correlations of 0.7850 for the 10-item test and 0.6642 for the 20-item test. Apparently, a practice effect was operating as mean scores were higher on the re-test.

In summary, Objective 1 was achieved. The trend to "mix" languages (i.e., Spanish response to Ensligh stimulus or vice-versa) should be explored as to its meaning.

Objective 2: "Kindergarten and primary pupils will perform equally well on an achievement test in mathematics given oral instructions in his dominant language."

Criteria: Achievement of math tasks specified in the "Milwaukee Bilingual Program Continuation Proposal, 1970" are as follows:

Kindergarten - 100% of pupils will respond correctly to five of the 13 tasks

Grade One - At least 25% of the pupils will respond correctly to ten starred objectives

Grade Two - At least 20% of the pupils will respond correctly to 14 starred objectives

Grade Three - No criterion set because it was the initial year of third grade in the program. Future criteria to be based on outcome.

Instructional Process

Mathematics objectives were synchronized with the "Elementary School Mathematics" English and Spanish textbooks. Through team teaching, pupils were taught math in their dominant language in ungraded ability groups.

Evaluation Procedure

Pupils were tested in their dominant language. Tests were translated into Spanish by permission of the publisher. Progress was assessed at mid-term and outcomes at year-end.

At mid-term kindergarten pupils were rated by the teacher on a performance checklist of objectives. Primary pupils were tested with Addison-Wesley workbook unit tests at their individual progress levels by a bilingual tester.

In April, kindergarten pupil progress was again checked by the teacher.

Primary pupils were given the Addison-Wesley workbook final review tests at their grade levels. Bilingual oral instructions were given by the teacher.

Findings

At mid-term (January), 83% of the kindergarten pupils had reached end-of-the-year criterion levels. The elementary supervising teacher was asked to estimate the outcome of the primary level mid-term tests which assessed pupil accomplishment of the skills teachers indicated they had studied. Eighty percent of the primary school pupils scored below the performance expected at that time by the elementary supervising teacher. Information returned to teachers of the ungraded math groups included individual scores, identification of the three most-missed questions, and identification of the mathematical concept represented by each test item. Teachers indicated that this information was used to review misunderstood concepts prior to beginning the next unit.

At year-end (April), all kindergarten pupils were able to respond correctly to at least five of the 13 tasks. Eleven percent of Vieau first graders and eight percent of Bruce-Guadalupe first graders responded correctly to each of the ten items. First grade performance did not meet the criterion of 25% correct. The second grade criterion, "20% of pupils will respond correctly to 14 of 23 starred items", was not applied because the 10-item review test was used. The mean percent of items answered correctly on the total test may be a better indicator of primary level performance. This is shown in Table III.

TABLE III

Program Pupil Achievement of Mathematics Tasks
April, 1971

Group	Number of Pupils	Number of Items	Percent Correct Response
Vieau Grade One	26	10	73.0
Bruce-Guadalupe Grade One	12	10	63.0
Vieau Grade Two	21	10	48.0
Bruce-Guadalupe Grade Two	13	10	86.0
Bruce-Guadalupe Grade Three	22	20	39.5

Year-end tests appeared to confirm mid-term findings that many pupils did not have a firm grasp of basic mathematics concepts beyond the readiness level. It should be noted that performances tied to criteria stated in terms of "percent of pupils who will respond correctly to ___ items" is difficult to assess and interpret. This is because of the sometimes arbitrary performance standard.

Objective 3: "Kindergarten and primary pupils will achieve levels specified in the Continuation Proposal in aural/oral skills in their first and second languages."

Criteria: English Language Arts - Pupils will demonstrate pre-post gains in a specified percent of the 11 categories on the Michigan Oral Language Productive Test as follows: kindergarten, gains in 40%; grade one, gains in 50%; grades two and three, gains in 60%.

Instructional Process

Both English and Spanish were used in teaching and as the language of the classroom. Teachers stressed development of English and Spanish listening, understanding, and speaking skills throughout the day.

Evaluation Procedure (English Language Skills)

A sample of five pupils matched for proportion of language dominance (Spanish only, English only, bilingual) was selected from each class. Sample pupils or their matched alternates were tested individually by bilingual testers at four intervals with the Michigan Oral Language Productive Test. The test, developed by the Michigan Migrant Primary Interdisciplinary Program, used three line drawings to elicit 43 verbal responses in the following 11 categories: uses of be, do, and have; comparison; double negative; past tense; past participle; pronunciation; plural; possessive; and verbs. The criterion was stated in terms of percent of the 11 categories in which gains were expected, as in Table IV. The inter-tester reliability of two testers was 0.85. Test-retest

reliability on 14 pupils was 0.96. Interim feedback reports indicated to teachers those categories where remedial work was desirable.

Findings

Criterion gains in language categories were achieved by all the pupils except the Vieau second graders (Table IV).

TABLE IV

Program Pupil Achievement in Eleven Categories of the Michigan Oral Language Test

Group	Percent of Categories Showing Pre-Post Gains	
	Expected	Actual
Vieau Kindergarten	40	73
Vieau Grade One	50	64
Vieau Grade Two	60	45
Bruce-Guadalupe Grade One	50	90
Bruce-Guadalupe Grade Two	60	73
Bruce-Guadalupe Grade Three	60	90

Pre-post achievement gains for program pupils are shown in Figure 1. All the pupils except the Vieau second graders showed gains in the percent of correct responses.

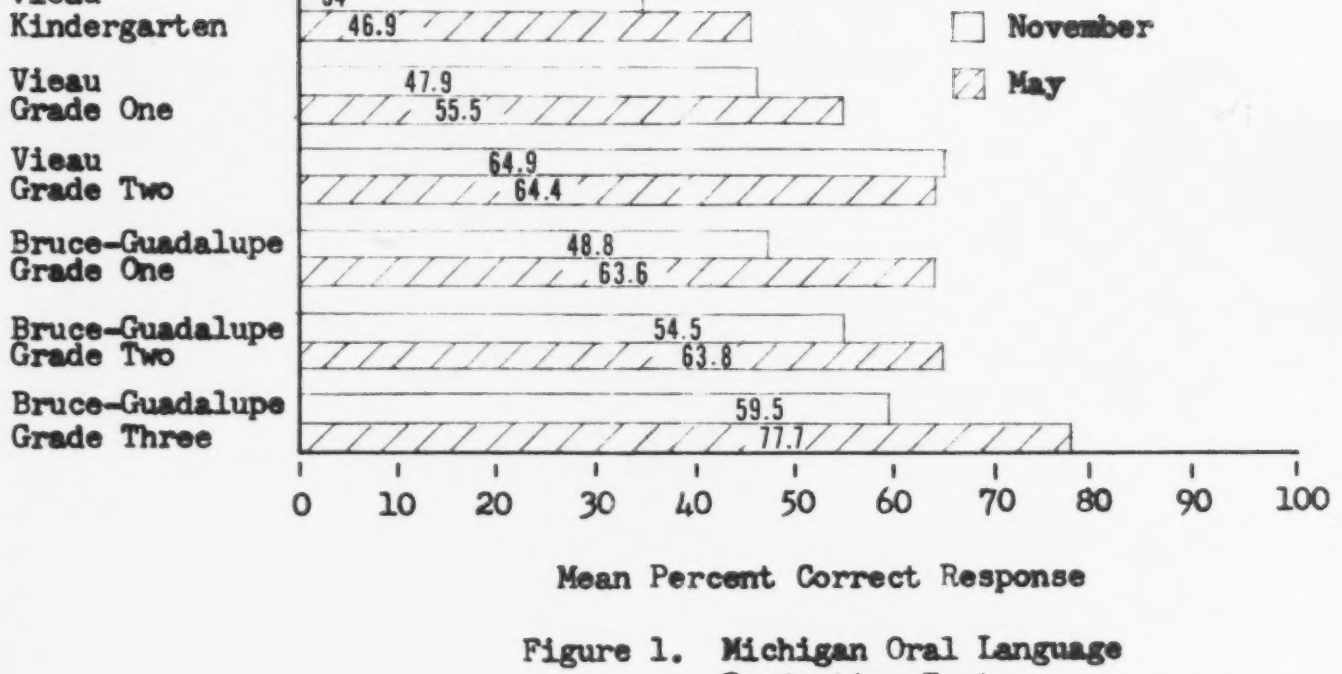

Figure 1. Michigan Oral Language Productive Test Percent Correct

Evaluation Procedure (Spanish Language Skills)

Aural/oral Spanish skills could not be measured as the teaching staff reported insufficient time to record pupil performance as suggested in the "Spanish Language Arts, K-3", published by supervisory staff early in 1971.

Findings

The extent of gain in aural/oral Spanish is not known except as reported under Objective 1, subject content language skills and Objective 5, classroom expressions and directions.

In summary, the expected gains in oral English were equaled or exceeded by all groups except Vieau second grade. The outcome was the same in terms of percent of correct response to the total test between November and May.

Objective 4: "Kindergarten and primary pupils will achieve levels specified in the Continuation Proposal in reading skills in their first and second languages."

Criteria: At the end of the year, bilingual classes will achieve the following mean scores on Guidance Testing Associates' Tests of Reading English and Spanish:

	English	Spanish
Grade One Level One Tests	14	14
Grade Two Level Two Tests	40	30
Grade Three Level Three Tests	50	40

Instructional Process

The policy of teaching reading in both languages to all primary pupils was revised after the November pre-test. During the first program year, 1969-1970, the first grade reading program initiated reading instruction in the pupils' first language and added reading instruction in the second language at mid-term. At the end of the year, bilingual program pupil scores were significantly lower than the comparison group on all Cooperative Primary Test subtests and on the Guidance Testing Associates' Tests of Reading English. This result was expected because of the dual-language bilingual reading program. As the 1970-1971 program developed, the teaching and supervisory staff observed indications that the early introduction of second language reading might retard development of overall reading skills. Therefore, in December, 1970, the teaching and supervisory staff decided to delay formal reading instruction in Spanish for English-dominant pupils at the teacher's discretion until completion of Level 5 in English. Formal reading instruction in English for

Spanish-dominant pupils was to be initiated at the teacher's discretion when the pupil could function comfortably in oral English.

Evaluation Procedure

Pupils were tested in November, 1970, and May, 1971, in the language(s) they were learning to read. Guidance Testing Associates' equivalent Tests of Reading English and/or Spanish were used: forms R-1-CE/R-1-DE and L-1-DEs/L-1-CEs for grade one; forms R-2-CE/R-2-DE and L-2-DEs/L-2-CEs for grades two and three. Reliability and validity information may be found in the Guidance Testing Associates' "Technical Report, 1967". The post-test (May) results compared performance with criteria. The pre-post results indicated gains since November.

Findings

1) Criterion-referenced

Both first grades exceeded the criterion mean score (14) by up to 14 points on English and up to nine points on Spanish tests of reading.

Both second grades scored below criterion levels in English (40) by up to nine points and Spanish (30) by up to 12 points.

The third grade exceeded both English and Spanish criteria by up to four points (Table V).

TABLE V

Program Pupil Mean Scores on
GTA Tests of Reading English and Spanish

Group	English		Spanish	
	Expected Score	Actual Score	Expected Score	Actual Score
Vieau Grade One	14	19.0	14	23.4
Bruce-Guadalupe Grade One	14	27.9	14	17.3
Vieau Grade Two	40	28.7	30	17.6
Bruce-Guadalupe Grade Two	40	34.2	30	25.7
Bruce-Guadalupe Grade Three	50	54.2	40	41.1

2) Pre-post

Pupils at all grade levels made statistically significant gains in pre-post English reading achievement as shown in Tables VI and VII. Except at the first grade level, consistent progress was not demonstrated in Spanish reading.

TABLE VI

Grade One Pupil Pre and Post Mean Scores on
GTA Tests of Reading English and Spanish

Group	Language	Test	Number of Pupils	Subtests: Vocabulary	Subtests: Comprehension	Total Correct	t
Vieau Grade One	English	Pre	30	5.30	4.10	9.40	6.80*
		Post	24	12.42	6.58	19.00	
	Spanish	Pre	16	5.38	3.63	9.00	6.82*
		Post	17	13.70	9.65	23.35	
Bruce-Guadalupe Grade One	English	Pre	17	4.15	4.00	8.15	4.07*
		Post	12	15.38	12.53	27.92	
	Spanish	Pre	6	5.50	3.67	9.17	1.84
		Post	9	11.50	5.80	17.30	

* Significant at the .01 level

TABLE VII

Grades Two and Three Pupil Pre and Post Mean Scores
on GTA Tests of Reading English and Spanish

Group	Language	Test	Number of Pupils	Subtests			Total Correct	t
				Level	Speed	Vocabulary		
Vieau Grade Two	English	Pre	28	6.00	1.21	6.14	13.35	5.27**
		Post	21	9.86	4.47	14.33	28.67	
	Spanish	Pre	19	6.26	3.16	6.63	16.05	0.54
		Post	15	5.67	3.93	8.00	17.60	
Bruce-Guadalupe Grade Two	English	Pre	12	6.00	3.39	9.31	18.69	4.37**
		Post	13	14.30	4.00	15.85	34.15	
	Spanish	Pre	6	10.68	2.50	8.83	22.00	0.45
		Post	7	10.42	2.85	12.42	25.71	
Bruce-Guadalupe Grade Three	English	Pre	17	16.33	6.50	20.44	43.28	2.37*
		Post	19	21.84	8.10	24.21	54.16	
	Spanish	Pre	8	14.13	8.13	19.25	41.50	0.05
		Post	8	15.50	5.75	21.14	41.12	

* Significant at the .05 level
** Significant at the .01 level

Figure 2 compares scores on the equivalent tests of English and Spanish reading.

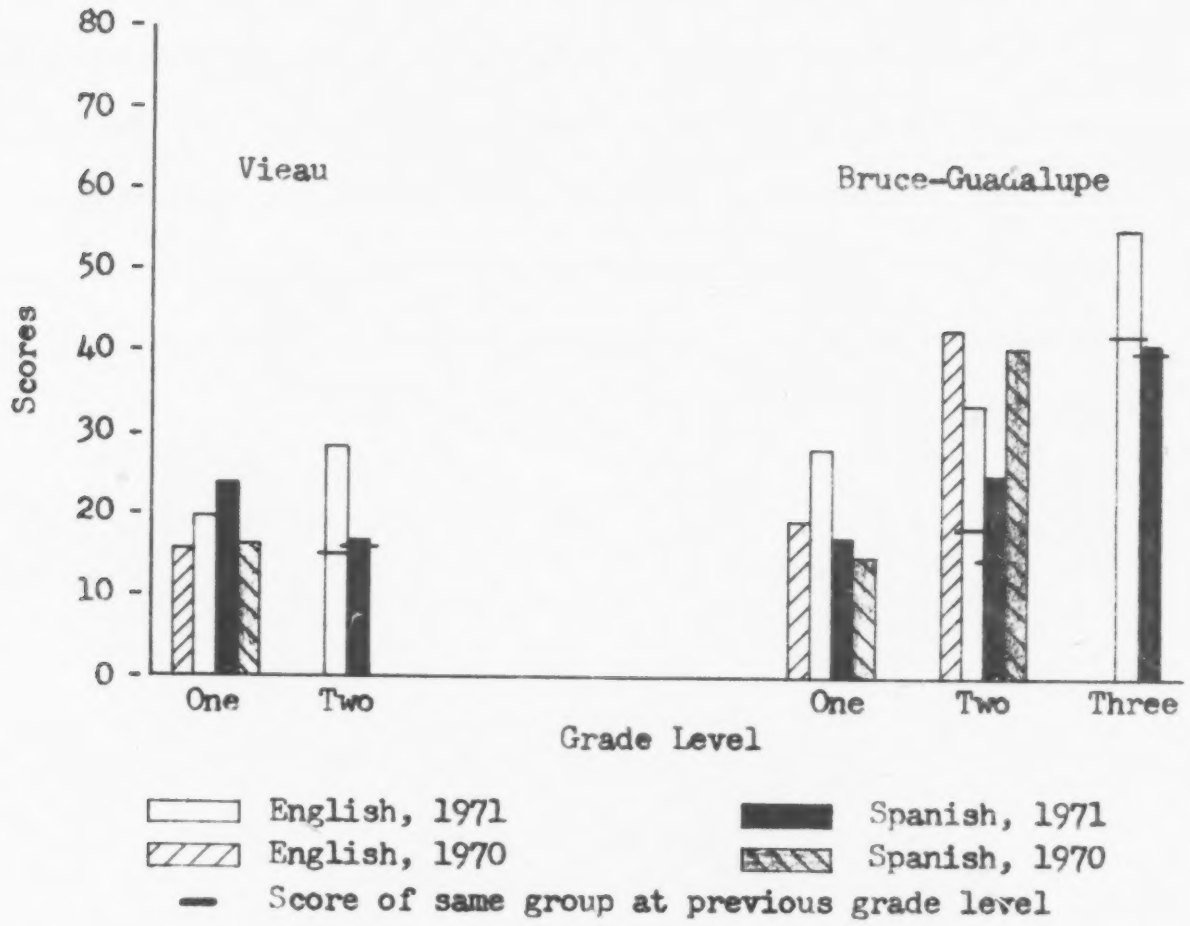

Figure 2. Mean Scores of Project Pupils on GTA Tests of Reading English and Spanish, 1970 and 1971

In 1971, all except the Vieau first grade scored higher in English than in Spanish reading. The hatch marked bars representing the 1970 first grade class show that in 1971 both Vieau and Bruce-Guadalupe repeated the pattern but scored higher.

A second grade bilingual class was added to Vieau this year. Differences from 1970 (indicated by horizontal bar) represent different levels of the test. At Bruce-Guadalupe, the 1970 second grade (hatched bars) scored higher than the 1971 second grade. Bruce-Guadalupe third graders

took the same level of reading tests in second and third grades. The mean scores are comparable and indicate gains in English but not Spanish reading.

The change in time of introduction of second language reading and the development of an ungraded team teaching program in reading during the year are factors that probably affected reading achievement. However, the same factors were the result of staff and management decisions to modify process in an attempt to improve progress toward attainment of the objective.

Objective 5: "Kindergarten and primary pupils will respond appropriately to classroom directions and expressions in English and Spanish according to designated grade level expectations."

Criterion: Expected Percent Correct Response

	Kinder-garten	Grade One	Grade Two	Grade Three
English	75	100	100	100
Spanish	75	80	85	90

Instructional Process

Teachers were to utilize a list of 37 "classroom commands and expressions" in employing English and Spanish as the language of the classroom. By the end of primary, pupils were expected to be able to respond appropriately to instructions heard in Spanish or English (e.g., "Open your book.", "Abre el libro.").

Evaluation Procedure

Performance was evaluated in February, 1971, in a group game situation modeled on "Simon Says" by a bilingual tester and a rater. Items were selected randomly from the list for each class, ten for kindergarten and twenty for primary, half English and half Spanish. Children were tested in groups of five, their behavioral responses to the game leader (tester) were recorded correct or incorrect by the rater. The test was repeated the following day to all but kindergarten pupils to determine its reliability.

Findings

As expected, criterion performance had not been achieved at the time of testing (early spring), as shown in Table VIII. However, the fact that

60-87% of the pupils were able to respond correctly is evidence of attainment of bilingual skills. Test-retest correlations of .75 or higher were considered indications of satisfactory test reliability. By this standard the test was reliable for Bruce-Guadalupe grade two in both languages and in grade three for English. Following testing, teachers were asked to check those items which had been used in the classroom. The only class in which all items had been used was Bruce-Guadalupe grade two, the group of high re-test reliability.

TABLE VIII

Program Pupil Mid-Term Achievement in
Classroom Expressions and Directions

Group	English			Spanish		
	Number of Pupils	Criterion Percent Correct	Actual Percent Correct	Number of Pupils	Criterion Percent Correct	Actual Percent Correct
Vieau Kinder-garten	16	75	66	16	75	40
Vieau Grade One	17	100	81	17	80	64
Bruce-Guadalupe Grade One	14	100	88	14	80	74
Vieau Grade Two	15	100	70	14	85	64
Bruce-Guadalupe Grade Two	13	100	82	13	85	78
Bruce-Guadalupe Grade Three	16	100	87	15	90	83

Objective 6: "Kindergarten and primary pupils whose first language is English will score as high as comparison groups in tests of reading English and reading readiness."

Criterion: Program pupil mean scores are to equal or exceed those of the comparison group.

Instructional Process

Bilingual program pupils whose first language was English were taught English language skills in kindergarten and English reading thereafter. On attaining Level 5 achievement in English reading, Spanish reading was introduced to bilingual program pupils, after which they were in both English and Spanish reading groups.

Evaluation Procedure

At the kindergarten level, English-dominant project and regular kindergarten pupils were compared on the word meaning, listening, matching, and alphabet subtests of the Metropolitan Readiness Test, Form B.

At the primary level, project and regular groups were compared on the listening, word analysis, and reading subtests of the Cooperative Primary Test, Form 12B. Bruce-Guadalupe grades one, two, and three had no comparison groups and were not included in the evaluation of Objective 6.

Both tests were administered by classroom teachers in May, 1971.

Findings

As indicated in Table IX, program kindergarten pupils met the objective by exceeding performances of the comparison group. The mean differences favoring the bilingual group ranged from five to 24 percent.

TABLE IX

Comparison of Mean Scores on Metropolitan Readiness Subtests Between Vieau Bilingual and Comparison Kindergarten English-Dominant Pupils

Group	Number of Pupils	Subtests			
		Word Meaning	Listening	Matching	Alphabet
Bilingual	9	8.66	10.44	9.00	10.00
Comparison	11	7.09	9.00	6.81	9.36

A graphic form of Table IX (Figure 3) shows that bilingual program English-dominant pupils were as prepared as those in the regular kindergarten to learn to read.

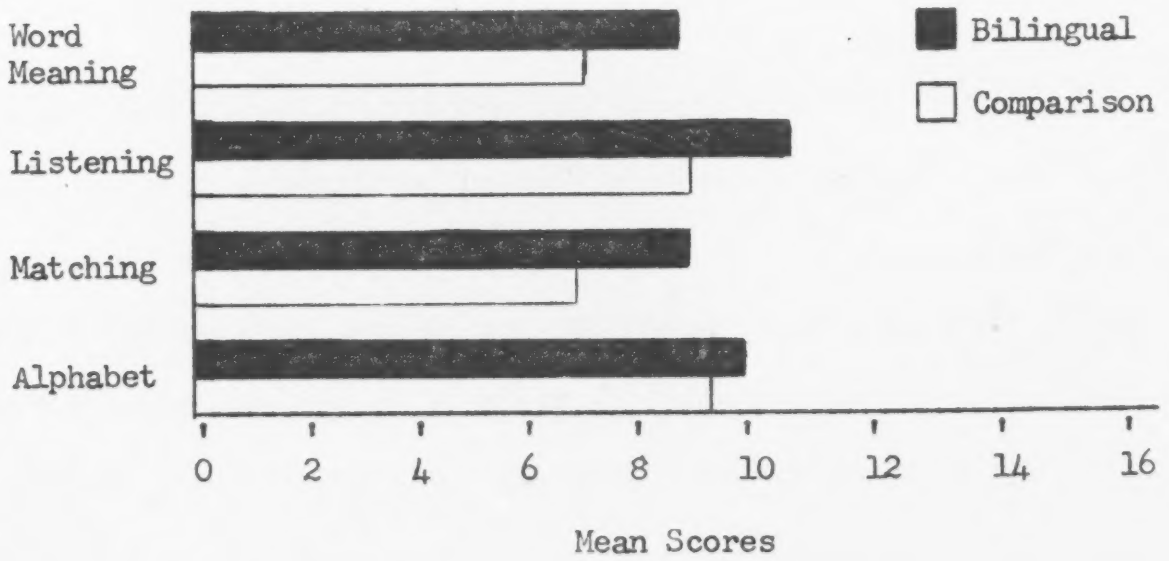

Figure 3. Comparison of Mean Scores on Metropolitan Readiness Subtests Between Vieau Bilingual and Comparison Kindergarten English-Dominant Pupils

First grade English-dominant program and comparison pupils differed significantly only in the "listening" subtest of Cooperative Primary subtests related to reading (Table X).

Second grade English-dominant bilingual program pupils scored 13% to 32% lower than English-dominant pupils in the regular class in all English language skills and did not satisfy the English reading criterion (Table X).

TABLE X

Comparison of Mean Scores on Cooperative Primary Subtests Between Vieau Bilingual and Comparison First and Second Grade English-Dominant Pupils

Group	Number of Pupils	Subtests: Listening X	Listening SD	Word Analysis X	Word Analysis SD	Reading X	Reading SD
Grade One							
Vieau Bilingual	15	29.46	(4.36)	29.40	(5.10)	19.66	(3.66)
Vieau Comparison	22	32.95	(5.56)	30.72	(8.53)	18.81	(7.54)
t		-2.14*		-0.58		0.45	
Grade Two						N = 13	
Vieau Bilingual	14	33.35	(5.81)	35.07	(8.52)	21.69	(8.00)
Vieau Comparison	18	38.55	(4.61)	49.77	(6.31)	31.72	(5.20)
t		-2.75**		-5.42**		-3.96**	

* Significant at the .05 level
** Significant at the .01 level

Figures 4 and 5 illustrate the results reported in Table X.

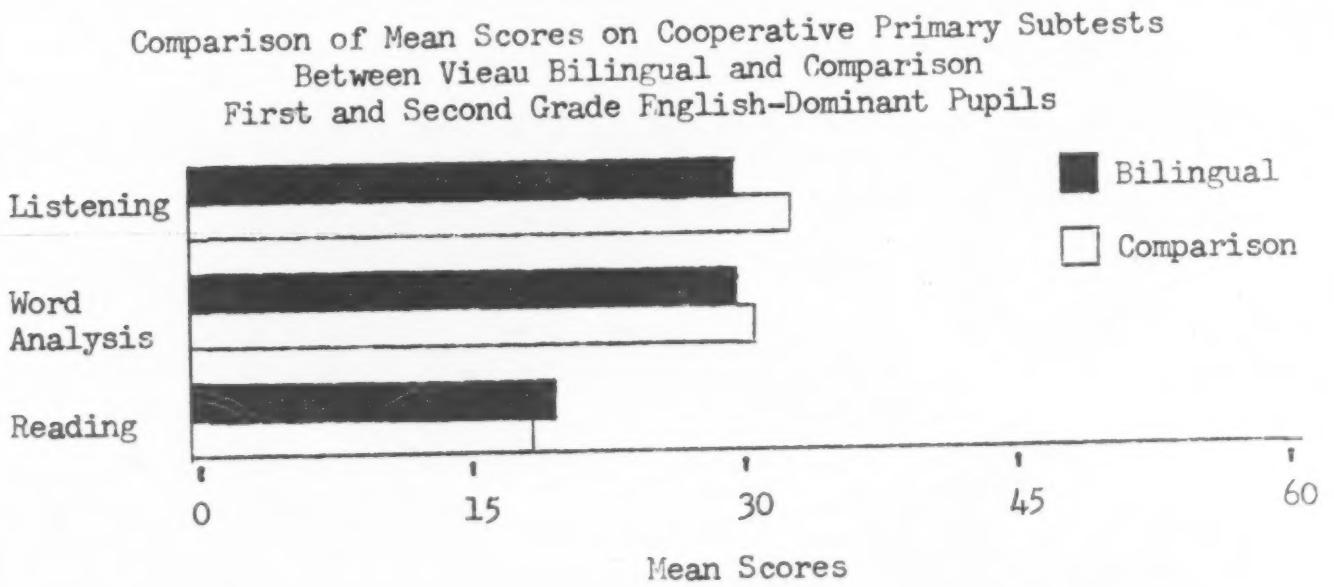

Figure 4. Grade One

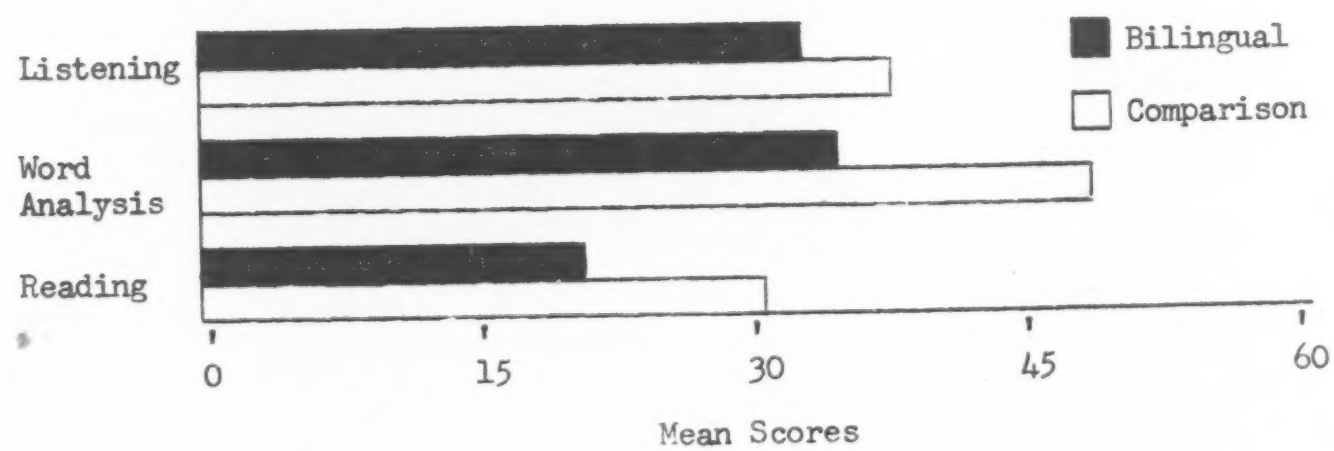

Figure 5. Grade Two

In summary of Objective 6 outcomes, English-dominant bilingual program kindergarten and first grade pupils finished 1971 at least on a par with their peers in all but one subtest. With that exception, their performance satisfied the objective. Second grade English-dominant bilingual program pupils lagged a little behind their peers in reading English. In considering this outcome, it must be pointed out that almost all of the bilingual program pupils were also learning to read in a second language,

Spanish. Therefore, although less time was spent in English reading instruction, pupils were expected to acquire second language skills. The gap may be a function of bilingual learning which will close over time. It may signal the need to delay the introduction of Spanish reading for English-dominant pupils beyond the current Level 5. A certain amount of lag was anticipated in stating an overall goal for the elementary program of "grade level achievement by the end of grade six".

Objective 7: "A majority of pupils will attain grade level achievement in all subjects by the end of Grade 6."

Criterion: Grade six bilingual pupils will equal or exceed mean scores of Milwaukee ESEA schools on the Iowa Test of Basic Skills.

Instructional Process

Milwaukee Public Schools curriculum guides were adapted for the basic bilingual curricula.

Evaluation Procedure

Supervisory staff members set the criterion standards. The first criterion measurement will be in 1974, when a program group reaches grade six. Meanwhile, data are collected each year for the longitudinal comparison of bilingual and regular classes. The tests were those administered under the direction of the Milwaukee Public Schools City-Wide and Special ESEA Title I Testing programs: Metropolitan Readiness Test, kindergarten; Cooperative Primary Tests, grades one, two, and three; and the Cognitive Abilities Test, grade two. All tests were administered by classroom teachers in May, 1971. The 1970 school mean scores were used as the baseline measure of grade-level achievement for Vieau groups because the tests used did not yield grade-equivalent scores.

Findings

Kindergarten bilingual program pupils scored 20% higher than the comparison kindergarten pupils on the Metropolitan Readiness Test (Table XI). Both groups were considerably better prepared for first grade than the 1970 kindergarten pupils (Figure 6).

TABLE XI

Comparison of Metropolitan Readiness Test Mean Scores
Between Bilingual and Comparison Kindergarten Pupils

Group	Number of Pupils	Mean
Bilingual	10	58.7
Comparison	18	46.8

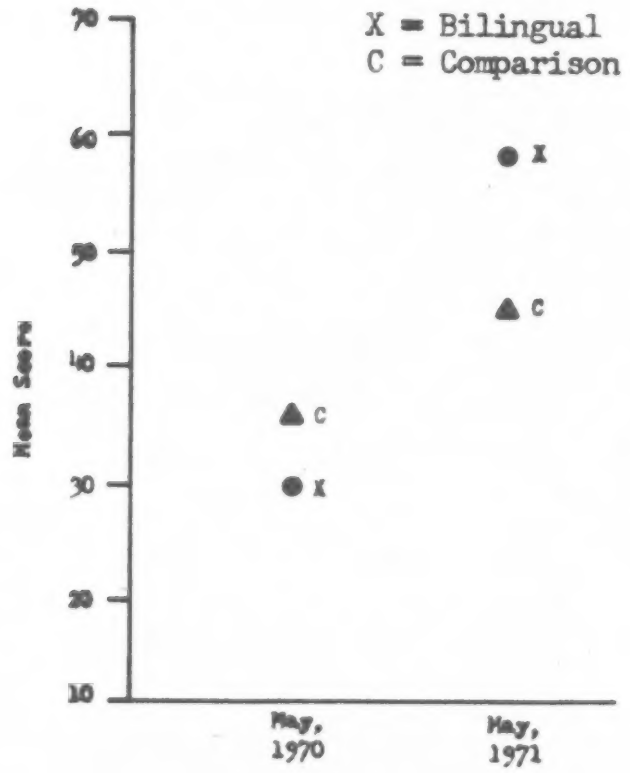

Figure 6. Kindergarten Mean Scores on Metropolitan Readiness Test

At the first grade level, bilingual program pupils scored 7% higher than comparison pupils in reading and from 4% to 13% lower than comparison pupils in listening, word analysis, and mathematics.

Second grade bilingual pupils scored lower than comparison pupils in all subtests and only 1.3 points above the bilingual first grade in reading (Table XII).

TABLE XII

Comparison of Bilingual and Comparison Pupil
Mean Scores on Cooperative Primary Tests

Group	Number of Pupils	Rdg	t	L	t	WA	t	Math	t
Grade One									
Vieau Bilingual	12	19.2	0.58	29.3	1.75	28.0	0.41	27.9	1.85
Vieau Comparison	11	17.8		33.1		29.2		32.0	
Bruce-Guadalupe	12	12.5		29.5		28.5		32.5	
Grade Two									
Vieau Bilingual	20	20.5	5.47*	32.3	3.40*	34.5	6.58*	33.3	5.43*
Vieau Comparison	20	32.3		38.4		49.9		44.0	
Bruce-Guadalupe	11	28.2		34.5		40.5		37.3	
Grade Three									
Bruce-Guadalupe	16	28.4		30.9		47.6		35.1	

* Significant at the .01 level

Rdg = Reading; L = Listening; WA = Word Analysis

In a comparison with the 1970 Vieau first grade mean scores, all 1970-1971 groups exceeded last year's reading score. All pupils but those at Bruce-Guadalupe equaled or exceeded the 1970 performance in listening and word analysis. Only the comparison group reached the 1970 level in math (Figure 7).

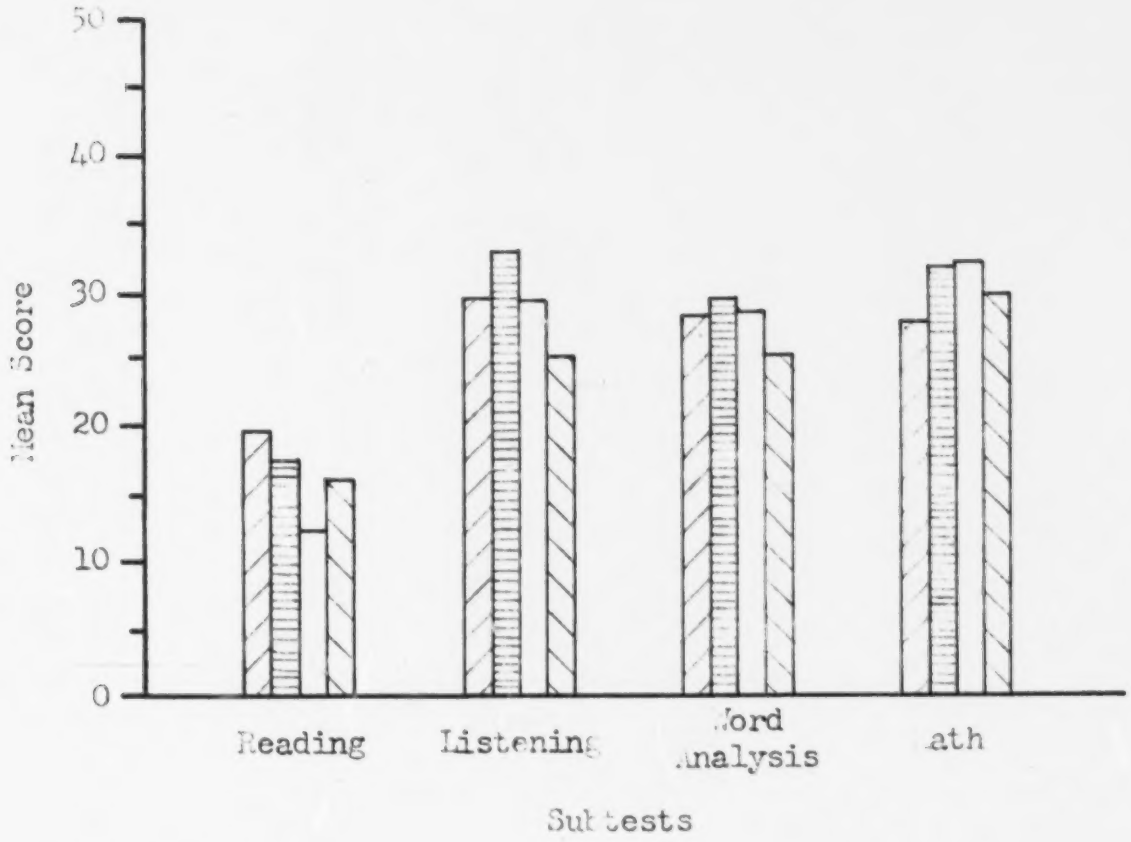

Figure 7. Grade One Mean Cooperative Primary Test Scores

The 1970 Vieau school second grade means were not equaled by the 1971 Vieau bilingual second grade but were exceeded by the comparison group. Progress since 1970, when pupils took the same test at the end of first grade, is indicated by the area above the dark horizontal bars in Figure 8.

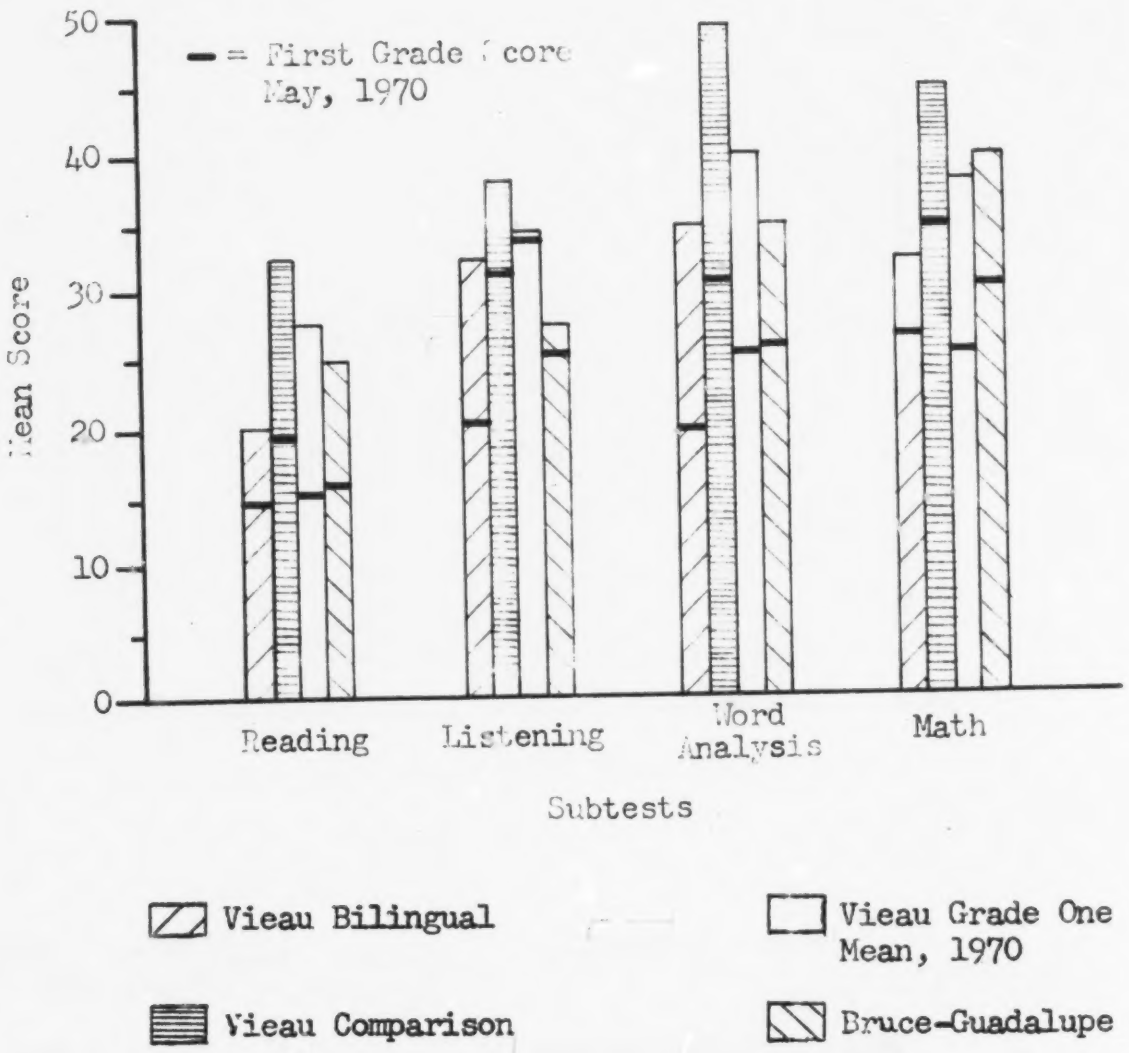

Figure 8. Grade Two Mean Cooperative Primary Test Scores, 1970 and 1971

Second grade comparison pupils were 14% above the bilingual group in IQ, as measured by the Cognitive Abilities Test (Table XIII).

TABLE XIII

Mean Scores on the Cognitive Abilities Test
of Second Grade Bilingual and Comparison Groups

Group	Number of Pupils	Mean IQ
Vieau Bilingual	20	87.4
Vieau Comparison	20	101.2
Bruce-Guadalupe	11	86.8

The third grade at Bruce-Guadalupe had no comparison group. The class performance on the Cooperative Primary Test in 1970 and in 1971 is illustrated in Figure 9.

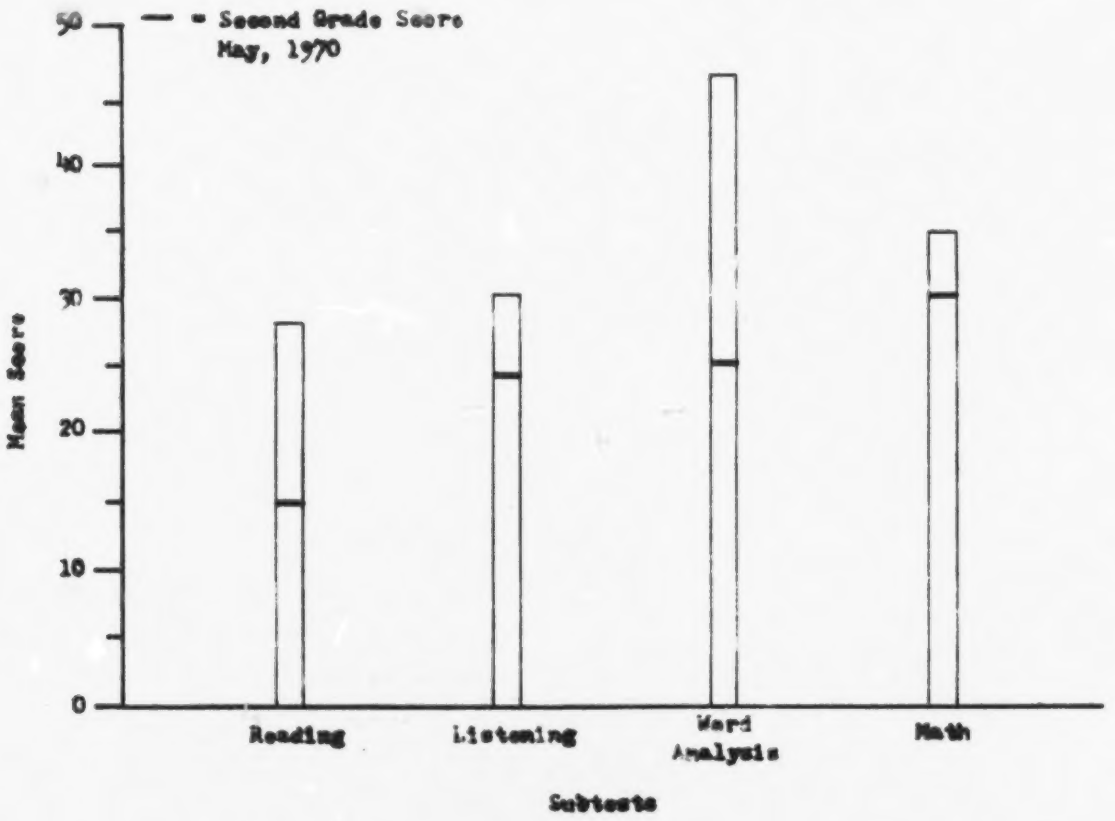

Figure 9. Grade Three Mean Scores on Cooperative Primary Tests

Summarizing the outcomes of Objective 7, kindergarten pupils exceeded comparison group performance on the measure of readiness for school. First grade bilinguals were on a par with their peers and the second grade bilingual group was behind the comparison group on the Cooperative Primary subtests. The comparatively lower achievement at second grade was consistent with outcomes described under Objectives 4 and 6. Two factors which may have contributed to this finding are:

1) time spent in the simultaneous acquisition by pupils of bilingual and monolingual skills

2) time spent in organization and modifications during early program development.

Objective 8: "Project pupils will achieve sufficient skills in Spanish so that at the end of Grade 6 they will attain Level 1 proficiency."

Criterion: Grade six bilingual pupils will equal or exceed Level 1 Spanish skills.

Instructional Process

All subject content was presented in Spanish as well as English. Spanish reading was presented to English-dominant pupils following achievement of sufficient skills in understanding and speaking at teacher discretion. Spanish-dominant pupils learned to read Spanish prior to and continuing with English reading.

Evaluation Procedure

During the second year, the project operated through grade three. The bilingual curriculum was developed through grade four. Therefore, Level 1 mastery of Spanish was not defined at that time and cannot be assessed at the sixth grade until a bilingual class at Vieau school reaches that level in 1974. Evaluation of the acquisition of Spanish language arts during the primary years prior to grade six was made possible by the project director who designed a checklist for that purpose. The "Pupil Achievement Record, Spanish Language Arts, Primary Level, K-3" is an individual pupil record of 22 language objectives incorporating vocabulary and grammar. The categories "understands, speaks, reads, writes" were to be checked by the teacher as the pupil achieved those skills for each objective. The achievement record checklist was presented to the staff in March, 1971.

Findings

The teaching staff decided not to initiate the use of the Pupil Achievement Record for Spanish language arts during the remainder of the

school year because of lack of time. Therefore, evaluation of progress in the acquisition of skills in Spanish was limited to outcomes found under Objective 1 in the use of subject content language patterns, Objective 4 for reading achievement, and in Objective 5 for classroom expressions and directions.

Objective 9: "Spanish-speaking pupils will develop a more positive self-image as indicated by parent response to a questionnaire regarding behavior changes resulting from participation in the Bilingual Program."

Instructional Process

Classes were taught in Spanish and English by a bilingual-bicultural staff and emphasized Spanish-American culture.

Evaluation Procedure

A questionnaire checklist in Spanish and English was sent to a random sample of half of the sets of elementary parents (N=70). Responses were anonymous.

Findings

Thirty percent of the parents who received questionnaires responded. To the question, "Does your child feel more proud to be a Spanish-American because of this program?", 60% of respondents checked "yes", 6% "no", and 3% "a little". Sixty percent responded "yes" and 2% "a little" to the question, "Does your child speak Spanish more often because of the program?". All respondents reported that because of the bilingual program their children liked school better and their schoolwork had improved.

In summary, a more positive self-image was indicated by those who responded. These parents strongly endorsed the program's cultural emphasis in answering the open-ended question, "What is your opinion of the Bilingual Program?". Examples were, "It's a fantastic idea to teach Spanish in the American schools", "I think it has helped my little girl a lot". There were two negative comments, one expressing concern that the child was behind in English reading.

Secondary School Level

Enrollment totaled 217 in classes offered at Lincoln and South Division High Schools. Counts by class are noted in Table XIV. Twenty-one percent of program pupils left Lincoln and 16% left South Division during the year. Of those who left, 26% returned to Puerto Rico or Mexico, 26% dropped out of school; the remainder moved, graduated, married or left for medical or legal reasons.

Behavioral objectives and criteria were stated by supervisory and teaching staff members who also developed the bilingual curricula.

TABLE XIV

Student Enrollment in the
Milwaukee Bilingual Program at Secondary Level

School	Course	Grade Level 7	8	9	10	11	12	Unknown	Total
Lincoln	Hispano	0	5	9	1	1	0	3	19
	U.S. History	0	0	0	3	8	4	0	15
	Reading	10	10	8	2	1	1	0	32
	Total	10	15	17	6	10	5	3	66
								Left School	14
South Division	Hispano				30	7	3	8	48
	U.S. History				2	42	0	0	44
	Reading				38	15	6	0	59
	Total				70	64	9	8	151
								Left School	24
								Total Lincoln and South	217
								Total Left School	38

Objective 1: "Given instructions in either English or Spanish, project pupils in the Hispano-American History, Language, and Culture course will demonstrate mastery of subject content."

Criterion: Pupils will respond correctly to at least half of the items on final achievement tests.

Instructional Process

Students were presented the history, culture, geography, current events, and relationship to the U.S.A. of Central and South America. Material was presented and pupil response encouraged in both English and Spanish.

Evaluation Procedure

The formal evaluation was the final exam devised by the classroom teacher at the end of the first semester. Questions were presented in both languages. Criterion performance was 50% correct.

Findings

Pupils at Lincoln were correct on 57% of their test. Pupils at South Division were 42% correct.

The criterion was met by only one school. The fact that the two tests had different formats may account for the inconsistent findings. The South Division test had two essay questions which required recall and communication rather than recognition. The Lincoln test was more objective, requiring factual answers.

Objective 2: "Given instructions in either English or Spanish, project pupils in the bilingual United States History course will demonstrate mastery of subject content."

Criterion: Pupils will respond correctly to at least half of the items on final achievement tests.

Instructional Process

The Milwaukee Public Schools' required 11th grade social studies course was adapted for bilingual Spanish/English presentation.

Evaluation Procedure

Scores on the teacher-designed final test at the end of the first semester were compared with the criterion 50% correct.

Findings

Lincoln students scored 77% correct; South Division students scored 59% correct. The criterion 50% or more correct was met.

Objective 3: "Students who have previously completed the tenth grade Hispano-American History, Language, and Culture course will receive passing marks in eleventh grade United States History whether or not they remain in the project."

Criterion: Students will receive a grade point average of C or better in U.S. History.

Instructional Process

Students were introduced to the social studies discipline at the tenth grade level in a bilingual class.

Evaluation Procedure

1970-1971 report card grades in U.S. History were collected for students who had Hispano-American History, Language, and Culture in 1969-1970. For purposes of comparison, letter grades were assigned numbers; A = 5.0 to F = 1.0. The criterion, C, = 3.0.

Findings

TABLE XV

1971 Grade Point Average in United States History of 1969-1970 Hispano Students

School	1970-1971 Bilingual United States History				1970-1971 Regular United States History			
	*N	Semester One	N	Semester Two	N	Semester One	N	Semester Two
Lincoln	7	3.7(C+)	7	3.4(C+)	8	4.4(B+)	7	4.0(B)
South Division	20	2.7(B-)	12	3.2(C+)	3	3.7(C+)	2	2.5(C-)

* N = Number of Pupils

At Lincoln High School, those students who were in Hispano-American History, Language, and Culture in 1969-1970 received C or better final

report card grades in bilingual U.S. History and in regular U.S. History. The two students in South Division regular classes averaged slightly below criterion, not enough to detract from the achievement of the objective (Table XV). It can be concluded that the presentation of tenth grade social studies material in languages comprehended by all students and presented by a teacher of similar culture provided background and motivation for grade-level performance in the required 11th grade U.S. History course.

Objective 4: "Pupils given special attention by the Bilingual Reading Specialist will show pre-post gains of at least one reading level."

Criterion: Pupils will advance at least one grade equivalent on the Nelson Test of Reading.

Instructional Process

One bilingual reading specialist at each secondary school used guidelines established at the pre-service workshop to impart to or improve English reading skills of Spanish-heritage pupils. Reading classes attracted the highest bilingual enrollment at both schools. Of 32 Lincoln pupils, 23 were from Spanish-only homes. Half of the 59 South Division students were from homes where only Spanish was spoken.

Evaluation Procedure

Pupils were tested in November with Nelson Reading Test, Form A. The post-test, Form B, was given in May.

Findings

Lincoln students started the year reading at a grade equivalent of third grade and seven months and finished at a level of fourth grade and five months. Those at South Division started at a higher level and ended with a gain of five months at six years and one month. The criterion gain of one grade-equivalent level was not met. Performance in reading English showed significant improvement (Table XVI). These gains in comprehension and vocabulary in reading English demonstrates that the reading program was helpful despite the small gap between the arbitrary criterion and actual achievement.

TABLE XVI

Pre-Post Mean Scores on the Nelson Reading Test
of Bilingual Secondary Reading Classes

School	Number of Pupils	Grade Level	Raw Score		Grade Equivalent Score	
			Pre	Post	Pre	Post
Lincoln	17	7-12	37.1	45.9*	3.7	4.5
South Division	35	10-12	64.1	75.0**	5.5	6.1

* Significant at the .05 level
** Significant at the .01 level

Additional Secondary Data

Evaluation of the stated objectives did not exhaust the information relevant to the outcomes of the program at the secondary level. Data were collected to report student opinion of the program, assistance to students by bilingual advisors, and student scores on tests administered by the City-Wide Testing Program.

Student Opinion of the Program:

Evaluation Procedure

Students in one bilingual Hispano or U.S. History class at each school completed an English/Spanish questionnaire. A revision of the 1969-1970 instrument included information requested by the project director.

Findings

As shown in Figure 10, more than half of the respondents:

1) learned content helpful in other subjects
2) developed more positive feelings about their culture
3) learned to speak Spanish or to speak it better
4) used the teacher as a source of guidance
5) were enrolled in the special reading class
6) improved over last year in school work.

Response to Question 2 (Figure 10) indicates that bilingual social studies courses have attained the program goal of promoting increased pride in Spanish heritage. This outcome, along with overall academic improvement and student perception of bilingual teachers as mentors, gives student endorsement to the secondary program.

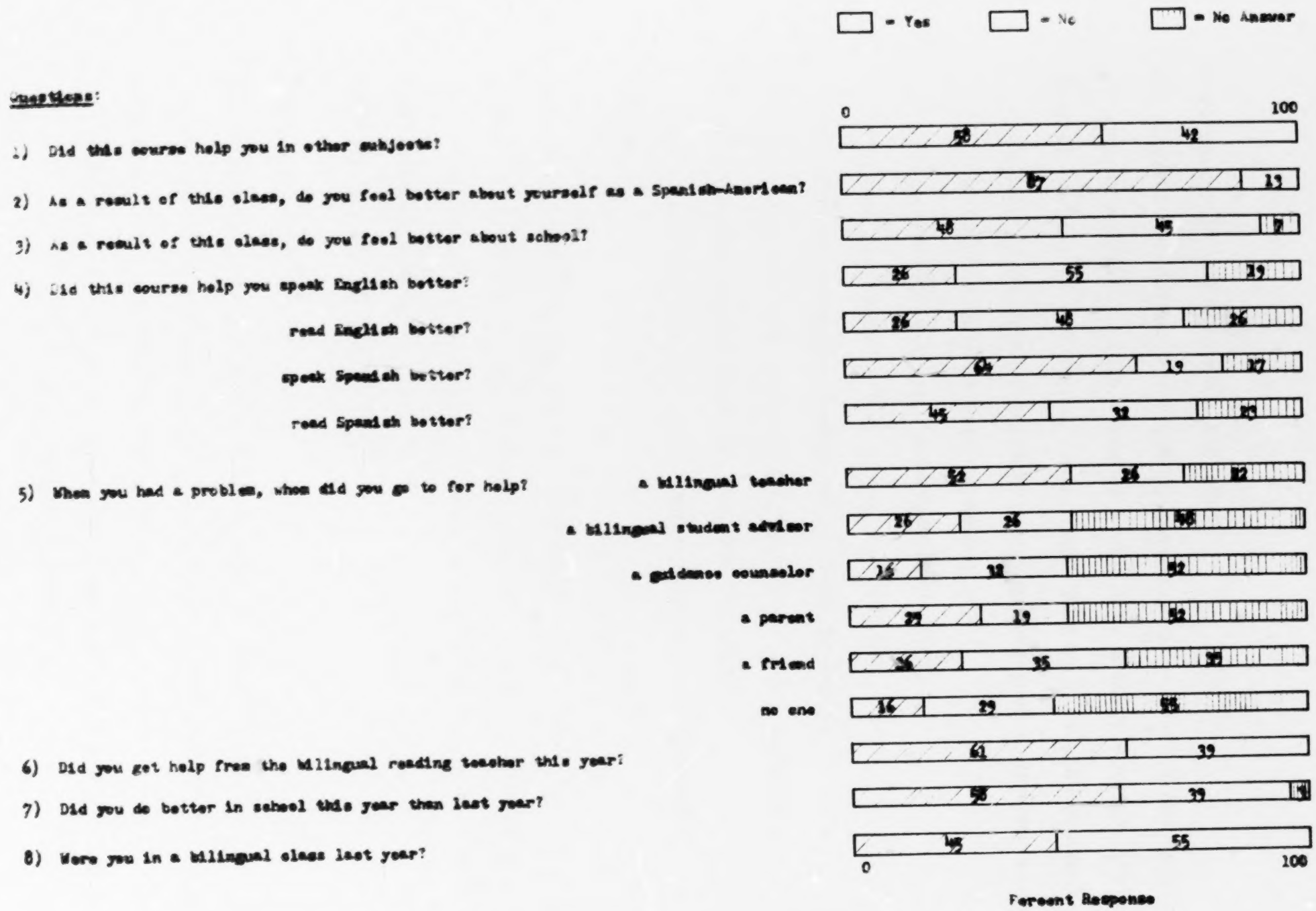
= Yes
= No
= No Answer
Questions:
1) Did this course help you in other subjects?
2) As a result of this class, do you feel better about yourself as a Spanish-American?
3) As a result of this class, do you feel better about school?
4) Did this course help you speak English better?
read English better?
speak Spanish better?
read Spanish better?
5) When you had a problem, whom did you go to for help?
a bilingual teacher
a bilingual student advisor
a guidance counselor
a parent
a friend
no one
6) Did you get help from the bilingual reading teacher this year?
7) Did you do better in school this year than last year?
8) Were you in a bilingual class last year?
0
100
Percent Response

Figure 10. Secondary Level Bilingual Student Opinion of the Bilingual Education Program

Bilingual Student Advisors:

Advising Process

One Latin-American paraprofessional at Lincoln Jr-Sr High School and two non-certificated aides at South Division High Schools assisted Spanish-American students in solving problems related to academic, home, and social life.

Evaluation Procedure

Weekly reports of student advisors to the project director were analyzed.

Findings

Students were assisted on 1,220 occasions at South Division and on 919 at Lincoln High Schools. Bilingual advisors guided new students during orientation, introduced them to college and job opportunities, assisted with personal problems and group activities, contacted parents and community agencies, and acted as cultural liaison persons between students and parents and school personnel. Assistance was not contingent on program involvement but was given to all Latin-American students. Students and bilingual teachers requested the addition of a male advisor at each school starting in September, 1971.

The assistance of bilingual student advisors was sought by students, parents, and school personnel. It appeared to be a highly desirable service.

Longitudinal Data File:

Data Collection Process

Scores of bilingual program students on tests administered city-wide were collected and recorded in student data files.

Evaluation Procedure

Annual outcomes will be reported. Results of the longitudinal study will be included in the final evaluation report.

Findings

1970-1971 mean scores of project students are shown in Tables XVII through XX.

TABLE XVII

Percentile Ranks of the Mean IQs
Lorge-Thorndike Intelligence Tests, Form 1, Grade 10, Fall, 1970

School	Group	Number of Pupils	Verbal		Non-Verbal		Total	
			RS	PR	RS	PR	RS	PR
Lincoln	Bilingual	5	75.0	04	84.7	15	78.4	05
	School	182	80.8	10	85.8	16	83.6	11
South Division	Bilingual	21	77.7	07	88.3	20	83.2	10
	School	610	90.1	24	98.7	44	94.6	33

RS = Raw score of the mean IQ
PR = Percentile rank based on national norms for individual students

TABLE XVIII

Percentile Rank* of the Mean Standard Scores
Tests of Academic Progress, Form 1, Grade 10, Fall, 1970

School	Group	Number of Pupils	Science	Reading	Mathematics
Lincoln	Bilingual	3	48	47	49
	School Total	184	49	48	48
South Division	Bilingual	20	50	47	48
	School Total	608	51	48	49

TABLE XIX

Percentile Rank* of the Mean Grade Equivalent
Iowa Tests of Basic Skills
Form 3, Grade 8, Lincoln Jr-Sr High School, Fall, 1970

Group	Number of Pupils	Vocabulary	Reading	Language	Work-Study	Arithmetic
Bilingual	3	15	10	4	4.5	10
School Total	220	14	6	12	11	9

TABLE XX

Percentile Rank* of the Mean Scores
Differential Aptitude Test Subtests
Grade 9, Lincoln Jr-Sr High School, Fall, 1970

Group	Number of Pupils	Verbal Reasoning	Numerical Ability	Clerical Speed and Accuracy
Bilingual Boys	6	15	10	30
Bilingual Girls				15
School Boys	89	15	10	10
School Girls	101	15	10	10

* Percentile rank of the mean raw score based on national norms for individual students

78

Testing was not required of students who were not English-dominant. No conclusion can be drawn from the small bilingual program sample.

Staff Objectives

The 16 staff objectives (listed in "Objectives" section) fell into four categories: curriculum development, bilingual materials development, improvement of teaching techniques, and parent-school communication.

Curriculum Development:

Organizational Process

Supervisory central office staff worked both independently and with teaching staff at pre-service and in-service workshops to create bilingual curricula.

Evaluation Procedure

The evaluator reviewed behavioral objectives. The project director and curriculum specialists reviewed course content for adherence to city and state guidelines.

Findings

All objectives were completed. Objectives and/or curricula were developed for:

- Spanish/English subject content language patterns
- orientation for the Ginn 360 reading series
- Grades 3 and 4 Spanish Language Arts, English Language Arts, science, social studies, and mathematics
- Hispano-American History, Language, and Culture
- bilingual United States History
- bilingual reading, secondary

With the exception of curricula for grades three and four, evaluation of the above by experts was described in "Special Activity Report, Pre-service Training Workshop, August 6-21, 1970". The third and fourth grade curricula were developed during the 1970-1971 school year and will be evaluated prior to September, 1971.

Curriculum development objectives were met.

Bilingual Materials Development:

Development Process

Staff members visited programs in Miami, Florida, and Gary, Indiana, to obtain ideas through observation. A workshop for staff was held in Milwaukee by the Spanish Curricula Development Center, Miami, Florida, whose Spanish language materials will be field-tested in Milwaukee in 1971-1972. The advisory board recommended Milwaukee acceptance of an invitation to participate as a regional center of the Cultural Adaptation Network for Bilingual/Bicultural Education, and this was approved by the Board of School Directors.

Audio-visual materials, achievement tests, a Spanish report card, and a pupil achievement record for Spanish Language Arts were developed.

Evaluation Procedure

Milwaukee Public Schools curriculum specialists rated the products on an "Evaluation of Curriculum Material" checklist developed by the Research Department. The Spanish report card was evaluated by parents on the questionnaire described in parent-community Objective 2.

Findings

All curriculum products were rated above average by the specialists. Thirteen of the 33 parents who responded to the questionnaire had received the Spanish report card. Twelve of them reported that it was helpful.

Improvement of Teaching Techniques:

Training Process

Training was made available to the teaching staff by various avenues:

1) Supervising teachers and curriculum specialists met with elementary staff at least once every two weeks and with secondary teachers at least once a month.

2) In-service workshops included teaching techniques (such as teaching of reading, grouping, and scheduling for team teaching).

3) A bilingual education course was initiated at Mount Mary College and was attended by five staff members.

4) "Spanish for Communication", a Milwaukee Public Schools in-service training course, was attended by 13 persons not in the project, including Vieau administrators and teachers.

Evaluation Procedure

1) Teacher performance was observed and evaluated by the audit team in April and May, 1971, and described in the subsequent audit team report.

2) Teachers were asked to specify the major accomplishments during the first semester on a questionnaire described in the interim evaluation report.

Findings

1) The audit team report identified the following strengths: bilingual reading and special help in high school; training program for teacher aides; flexibility of high school social studies bilingual program; classroom instruction in Spanish; individualized instruction; ability grouping; and operation of the advisory committee.

2) In response to the staff questionnaire, teachers specified in-service training as a major accomplishment.

Parent-School Communication:

Communication Process

Parent-school communication was encouraged by:

1) home visits by the community liaison person to families of absentees

2) contact with parents by bilingual student advisors via telephone and home-school visits

3) student advisors' assistance as interpreters and sources of information for parents

4) the Spanish/English "Bilingual Bulletin" initiated and sent to parents to inform them of project news

5) a Spanish report card was developed for Spanish-dominant parents of elementary pupils

6) year-end programs for parents by elementary pupils.

Evaluation Procedure

A random sample (170) of half of the parents was queried through a Spanish/English questionnaire. The liaison person's and student advisors' weekly reports to the project director were reviewed.

Findings

1) Nineteen percent of the parents sampled responded. Ninety percent of those who responded reported that they had more contact with school because of the bilingual program. All of those who reported receiving the Spanish report card indicated that it helped them.

2) The community liaison person visited homes, met with school personnel, contacted community agencies, and attended meetings held by Spanish-American organizations.

3) Bilingual student advisors visited homes on 109 occasions from South Division and 143 times from Lincoln High Schools.

Parent-Community Objectives

Objective 1: "The Advisory Committee will make recommendations regarding the staffing and the Continuation Proposal of the Bilingual Program to the Milwaukee Public Schools through the Bilingual Education Director."

Criteria: Were not stated for this objective.

Advisory Process

1) A sub-committee of three advisory committee members screened prospective bilingual staff members who were considered qualified by the Milwaukee Public Schools' Division of Personnel. The screening interviews were held to determine Spanish language ability, familiarity with Latin-American culture, attitude toward community involvement, and professional ability. Recommendations were submitted to the project director.

2) Recommendations of the advisory committee for additions to the continuation proposal include: (a) continuing in-service training and college level undergraduate training for teacher aides and student advisors and an additional student advisor, male, at each high school; (b) an additional team teacher and a bilingual resource teacher at Vieau School; (c) a summer workshop for materials development; (d) extension of bilingual kindergarten from half day to full day; (e) provision of more space for the bilingual program by removal of the regular eighth grade from Vieau School; (f) employment of a bilingual coordinator.

Findings

Eleven persons were interviewed for teaching positions by the screening committee. Nine of them were recommended for the bilingual program. Six of those recommended were employed.

With the exception of removal of the Vieau eighth grade, all advisory committee recommendations were included in the July 1, 1971-December 31, 1971 Continuation Proposal to the U.S. Office of Education.

Objective 2: "Parents, agencies, and community members will become more involved in school and community activities related to the school."

Criteria: Attendance at advisory committee meetings will be greater in spring, 1971, than in fall, 1970.

Involvement Process

Three methods were used to encourage involvement:

1) Program personnel were to encourage increased school involvement.

2) A "Bilingual Bulletin" was issued to pupils to deliver to their parents.

3) The public was notified of advisory committee meetings.

Evaluation Procedure

A parent questionnaire was sent to a random sample of parents of half the program pupils (170 total). The questionnaire provided feedback on the "Bilingual Bulletin" and on school contact.

Attendance at advisory committee meetings was tabulated. Increased attendance was expected.

Findings

Thirty-three parents (19%) returned the questionnaire. Those parents who received the "Bilingual Bulletin" found it informative. Some did not receive it from their children. Of those who responded, 90% reported more contact with the school because of the bilingual program which indicates achievement of the "school involvement" component of the objective.

Attendance at advisory committee meetings did not increase over the 65 present at the September, 1970, meeting. At the following six meetings, attendance ranged between 27 and 57. A special meeting was held in June to discuss the proposal that Milwaukee become the midwest regional center for the Cultural Adaptation Network for Bilingual/Bicultural Education.

The executive director of the Network came from San Antonio in response to a request of the advisory committee for detailed information on Milwaukee's possible participation. Although 1,900 announcements were distributed in the community a week prior to the meeting, fewer than 25 persons attended, including only four of the 22 advisory committee members. The criterion of increased attendance at advisory committee meeting from fall to spring was not met.

Additional Advisory Committee Information

Guidelines concerning the composition of the advisory committee were provided at the organizational meeting in April, 1969. The 1969-1970 evaluation report concluded with a recommendation that the duties, terms of office, and functions of advisory committee members be defined. They were not specified by the close of the second funding period.

In 1970-1971:

Six of 11 original parent-community members of the advisory board elected in April, 1969, remained. Ten new members were appointed by the advisory board chairmen. Two student members were elected from each high school. Principals and teachers were ex-officio members serving as resource people.

On March 28, 1970, parents of Lincoln High School formed a northside Latin Advisory Committee of eight members through the Puerto Rican Center. Because the committee was not organized through the school principal, it was not recognized as a component of the Milwaukee bilingual program.

On May 20, 1971, the Board of Bruce-Guadalupe Community School notified the project director that it was withdrawing from the program at the end of the school year to "better serve the need of our children and our community through the initiation of our own independent bilingual program". The community school withdrawal was interpreted as a preference for autonomy from adherence to policies at variance with its own.

SUMMARY

During the second year of operation, the Milwaukee Bilingual Education Program expanded one grade as planned at the elementary and secondary levels. Consequently, the program grew in numbers of staff and participants. There was increased activity in the refinement of existing curricula and adaptation of the additional levels to the Spanish/English bilingual model. More school-home contacts were made. There follows a brief review of the program outcome highlights.

Elementary Outcomes

Comparisons were made of the bilingual and regular classes at Vieau School. According to outcomes of final tests, kindergarten bilingual pupils were better prepared for first grade than the regular class. First grade bilingual pupils ended the year on a par with their peers. This was an improvement over the 1970 first grade class which finished behind the regular group. That class remained below the regular second grade in 1971 in academic achievement for reasons unknown.

At all levels, at both Vieau and Bruce-Guadalupe schools, bilingual program pupils demonstrated increasing proficiency in understanding and speaking Spanish. A majority of pupils were able to comprehend and to speak both English and Spanish in daily classroom activities. Many English- and Spanish-dominant first grade pupils began to read Spanish. Second and third grade Spanish reading did not improve over the year.

Parents of elementary pupils reported that their children liked school better and improved in school work because of the program. Almost two-

thirds of the parents observed that their children demonstrated greater pride in their Latin-American heritage as a result of time spent in the program.

Secondary Outcomes

According to criteria established by staff, students demonstrated partial mastery in tenth grade Hispano-American History, Language, and Culture and mastery in United States History courses. Hispano was designed as a prelude to the required 11th grade U.S. History course. Those students enrolled in Hispano in 1970 received at least passing grades in U.S. History in 1971, confirming the effectiveness of the sequence.

A gain of one grade level in reading English was expected of students in the bilingual reading classes. Although the average gain fell a little short of the criterion, there was statistically significant improvement in pre-post reading test scores.

Students reported that participation in the bilingual classes helped in all academic areas. The cultural emphasis resulted in increased knowledge of and pride in their Latin-American heritage. English-dominant students developed skills in speaking Spanish. The teacher was perceived as a mentor as well as an instructor.

Staff Outcomes

Supervisory and teaching staff developed bilingual curricula for third and fourth grade levels. Some Spanish-language materials were developed. Staff were trained to participate in 1971-1972 in the evaluation of materials developed by the Spanish Curricula Development Center.

Staff members attended pre-service and in-service workshops and college courses to develop professional skills.

Communication between school and home was strengthened in home contacts by the Latin-American liaison person and student advisors, and by the publication of Spanish report cards and a newsletter, the "Bilingual Bulletin".

Parent-Community Outcomes

All new staff members were recommended by the advisory committee. Five of the six recommendations for program expansion were approved by the Board of Directors of the Milwaukee Public Schools and the U.S. Office of Education. They include an augmented staff, training for non-certificated personnel, a materials development workshop, a full-day kindergarten, and acceptance of an invitation to host the midwest regional center for the Cultural Adaptation Network for Bilingual/Bicultural Education.

Lincoln parents formed a northside Latin Advisory Committee outside of Milwaukee Public School auspices.

Bruce-Guadalupe Community School withdrew from the program at the end of the school year.

Although parents reported increased contact with school because of the bilingual program, they did not increase their attendance at meetings of the advisory committee.

RECOMMENDATIONS

Because of both the successful outcomes and the challenges posed in problem areas, the innovative Milwaukee Bilingual Education Program should be continued. The following specific suggestions are based on outcomes of the 1970-1971 evaluation.

Recommendations for the Elementary Level

1) The kindergarten mathematics curriculum should be extended to accommodate the most able learners.

2) Pupil progress in primary ungraded mathematics should be monitored by the use of English/Spanish test booklets which accompany the text.

3) The use of the Spanish Language Arts Pupil Achievement Record should be implemented promptly to aid in ability grouping of pupils and evaluation of individual progress.

4) Staff should continue to investigate the optimal level for introduction of reading in the second language.

5) Processes should be specified in detail for those objectives which were met and remain relevant to program goals.

Recommendations for the Secondary Level

1) The bilingual student advisors should work with counselors at feeder schools and within high schools to disseminate information about the bilingual program to students and staff.

2) The evaluation should include more comparisons of program and non-program Spanish-American heritage students in achievement and ethnic attitude.

Recommendations for the Staff Level

The following staff recommendations were made by the audit team after an evaluation of program process.[1]

1) Potential secondary program candidates and their dominant language should be identified in junior high school.

2) Professional staff members should coordinate school-community links at the secondary level.

3) A qualified professional should be employed to work under supervision of the project director to coordinate the program.

4) Teachers should receive in-service training in the Science Curriculum Improvement Study science program.

5) Staff should receive in-service training in individualized instruction in social studies.

6) Primary teachers should balance written work with oral discussion and manipulative activities in the classroom.

7) Demonstrations of successful instructional procedures should be performed by staff members at in-service training workshops.

Recommendations for the Parent-Community Level

1) By-laws should be established which define the selection, terms of office, and responsibilities of advisory committee members and which specify rules of voting.

1 Audit Team Report based upon visits in April and May of 1971

APPENDIX A

Audit Team Report

Curriculum and Instruction Specialists

Wisconsin Department of Public Instruction

Based Upon Visits in

April and May of 1971

Team Members

Frank M. Grittner
Kenneth W. Dowling
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Report of the Curriculum and Instruction Audit Team On-Site Visit
to the Milwaukee Bilingual Program
April 21-22, May 19-20, and May 24, 1971

I. Introduction

On April 21 and 22 and on May 19 and 20 members of the Curriculum and Instruction Audit Team visited the Milwaukee schools for the purpose of monitoring the process of program operation of the bilingual program. Two team members also attended a meeting of the Community Advisory Committee on the evening of May 24. Other activities of the audit team included on-site visits to classes, meetings with the director of the program, attending an inservice meeting on the use of teacher aides, discussing the program with staff members and administrative personnel, and interviewing community representatives. The remarks which follow are based upon these activities.

II. Program Strengths

All members of the Curriculum and Instruction section of the Audit Team had visited the program during the previous year and, therefore, have had an opportunity to note changes which have been made on the basis of evaluative feedback. They have also observed aspects of the program which have appeared to function well and which have, therefore, been maintained. These favorable aspects of the program are listed below.

1. The bilingual reading and "special help" sections of the high school program offer individual help and make available a wide range of materials which are well suited to meet the special problems of the bilingual adolescent. Many students appeared to be making good use of the special opportunities which these sections provided.

2. During the inservice discussion on the role and function of teacher aides in the bilingual program it was evident that progress was being

made in the direction of improved utilization of these non-certificated personnel. Moreover, the teachers in the bilingual program were apparently given a great deal to say about designing a program of inservice training for the teacher aides which should greatly enhance the aide's usefulness to the program in the future.

3. The use of the Spanish Curriculum Development Center materials in teacher and teacher-aide training is a wise decision. These materials provide excellent resources in the areas of language arts, social studies, science, mathematics, fine arts, and Spanish as a second language, all at the primary level.

4. The high school social studies component of the Milwaukee Bilingual Program at Lincoln and South Division is providing a quality of instruction of which the community can be justly proud. Classes observed were characterized by much student involvement--and even excitement--which suggests that a high degree of learning is taking place. Besides the "in-class" activities of the program, it is significant to mention the number of field trips which have accented student learning experiences this year, and the plans that are now being made for more community involvement next year. One adjunct of the bilingual experience that can influence the total Milwaukee social studies program toward an acceptance of more flexible and individualized experiences is the nature of experimentation with class structure both within and outside of the school building. This characteristic of the bilingual program is significant and other social studies staff members within Lincoln and South Division should be encouraged to help the program to the limits of their resources. If others within the Milwaukee social studies program are monitoring the progress of the bilingual program, perhaps the program will have a positive effect not only for Latin students, but, indeed, for students throughout the whole system.

5. An excellent teaching situation was observed at the elementary school level in which instruction was carried on entirely in Spanish. There was a high level of pupil involvement in which the children responded in Spanish using phrases or complete sentences. The observer noted a high level of teacher enthusiasm for this activity. It was also noted that the teacher made an effort to have each child's response, whether correct or incorrect, directed toward giving the child a feeling of success. This is a concrete example of activities which were congruent with such program objectives as building a more positive self-image, and allowing the student to learn in the language in which he is most fluent.
6. From the many specific observations of teacher interaction with pupils, it is possible to generalize and say that the bilingual staff is far above average in such areas as giving personal attention to children as individuals, allowing children to move about freely within the room, and establishing a pleasant, non-threatening classroom environment. In regard to the classroom itself, the bilingual approach was much in evidence in the form of displays, calendars, bilingual social studies materials, etc. Another positive feature of the bilingual classrooms was the provision of interest centers including such things as aquariums and small libraries. Also, the high ratio of aides to children in each of the elementary school classrooms is a commendable feature as is the opportunity which children are given to work at their own level.
7. In the area of mathematics, instruction appeared to be greatly enhanced by the informal ability grouping and by the use of teacher aides. Observers were favorably impressed with the concern which was evidenced for the "slow" learner. The overall welfare of this group was given much consideration.

8. The Community Advisory Committee appeared to be operating effectively and to be meeting the goals for which it was intended. The meeting on the evening of May 24 was well attended by parents and community leaders. A member of the community was presiding over the meeting and the discussion was carried on almost exclusively by community members rather than by representatives of the school system. It was clear that community leaders were highly satisfied with the operation of the bilingual program. It was also clear that they felt that their input into the program operation was both meaningful and valuable. It was clear that their wishes were being heeded in such matters as the screening of teachers for the program and in the design of the continuation proposal.

III. Recommendations

Through discussions with administrators, teaching staff members, teacher aides and community representatives, it was determined that most local people viewed the bilingual program as a highly desirable addition to the curriculum of the participating schools. (A series of on-site visits by audit team members over a two-year period has also led to the same positive conclusion concerning the high quality of the Milwaukee Bilingual Program.) However, as is the case with most new programs, there are areas in the bilingual program where additions or modifications could further strengthen certain components of the program. The remarks which follow are a summary of suggestions for future development and improvement of the program as viewed by the Curriculum and Instruction Audit Team.

1. An improved system for identifying potential candidates for the high school bilingual program might well be implemented at the 9th grade level while these students are still in the junior high school. If feasible, concentrated counseling program for students who are between

9th and 10th grades could greatly improve placement of students in the senior high bilingual program. Such a program would not be limited only to the scheduling of students but would emphasize genuine counseling procedures. At the very least, it would be well to increase the sophistication of techniques for identifying the dominant language of students during the year preceding entry into the program.

2. As for coordination of the high school program within the school and between the school and various community institutions, it might be well to expand present efforts (budget permitting) by identifying staff members in the bilingual program who are highly regarded in the school and community, and who could be given released time to perform coordinating functions.

3. In examining existing workloads in the administration of the program there is a strong need indicated for additional personnel to direct and coordinate the activities of the program as it expands year by year. A program coordinator working under the present director who had suitable qualifications (including the ability to relate to the Latin community) would appear to be a necessity in the near future.

4. Based on very limited observations it appears that help from an experienced consultant could be very helpful in implementing the science program that is being used at one elementary school (and which is proposed for use in the other). This program (the Science Curriculum Improvement Study or "SCIS") was developed with a very strong emphasis on laboratory investigation. Such activities should receive more attention in the work now being done at Bruce Guadalupe School.

SCIS is a relatively complex curriculum but if properly implemented it would be excellent for the bilingual program in that it bases communication on direct experience. In this sense, the contribution of this program could be invaluable to attaining the objectives of the project.

More specifically, in the area of science, it is recommended that the bilingual program:

A. Provide for indepth inservice education of teachers and aides so that they can: (1) define the role of science in elementary education, (2) define the potential value of science to the bilingual program, (3) use the SCIS printed materials and equipment according to the teachers guides that have been provided to them, (4) select and adapt those SCIS activities that are most appropriate for the bilingual project objectives, (5) establish a classroom atmoshpere that will promote free investigation by students using the SCIS materials, (6) accept a less dominant role for the teacher as well as the aides for the kinds of activity that are carried on in the classroom, and (7) translate appropriate student instructional materials into Spanish so that they can be used by those students who are dominant in that language.

B. Increase the amount of time devoted to teaching science in the classroom to correspond to the potential value of science education in meeting the general objectives that have been established by the project.

C. Reduce the number of behavioral objectives for science to those that are truly important indicators of desirable project outcomes. The present list taken from the SCIS materials is too extensive to be meaningful to the classroom teacher, while at the same time individual objectives are too specific for the teachers to relate them to the general objectives that have been identified for the elementary phase of the project.

At the present time science is playing a very minor role in the Milwaukee Bilingual Program. That role could be improved to greatly

benefit the project if teachers would take advantage of a unique feature of science: direct classroom experiences in science motivate students to communicate. Science information as presented through reading and discussion is of no more value to this project than is information from any other academic area.

The introduction of the SCIS activities was a wise decision if the problems of implementation can be solved. The benefits to be had from the free investigations involved in this program relate very well to the process of learning.

5. The program is now firmly established and its general concept appears to be accepted by staff members, administrators, the local community, and the students who are involved. Thus, it might be well to explore ways to expand the program into other schools and gradually to add other subject matter. For example, the SCIS science program mentioned above might possibly be developed as an experimental bilingual science course at grades 1-6.
6. Within the media center, which is being developed at Lincoln, it would be beneficial to prepare audio tapes that could serve as a data source for the courses in U.S. History and Personal Economics.
7. In the U.S. History sequence a series of perhaps 35 tapes (in Spanish) could be developed on topics which are now part of the course of study. For example, lectures or stories might be developed in Spanish for such areas as: the American Revolution, Jacksonian democracy, the Civil War, the Progressive Period, etc., etc.
8. Plans might also be made to translate some of the materials being used by the larger Milwaukee social studies program--particularly those materials in personal economics and sociology. Since these two areas seem to be part of the planned additions to the bilingual sequence and, because

of the multi-dimensional problem of translating these materials, it would seem prudent to start planning for this task as soon as possible.

9. If students are to have meaningful experiences in the community as they relate to economics and sociology programs, it would be useful to budget such equipment as cassette tape recorders, 35mm cameras, and 8mm movie cameras. As students work in small groups or as individuals in the community, gathering data and testing hypotheses relative to personal economics, these kinds of equipment will prove quite valuable. In this regard, a Special Projects Grant under the provisions of NDEA Title III might be helpful.

10. Because of the fact that, when a traditional program is presented bilingually, the concern for individual differences gains a sharper focus, it is imperative to continually think in terms of smaller instructional units (i.e., the individual and small groups). It is, therefore, recommended that some inservice time be allocated to the discussion of the relationships between small instructional groups, individualized instruction and the social studies program.

11. The use of manipulative items in the teaching of mathematics was more in evidence in some classes than in others. Every effort should be made to expand the use of such devices in all elementary school classes and to avoid placing excessive emphasis upon paper and pencil type operations.

12. The attention of the instructional staff at the primary school level should be constantly drawn to the need for a balanced instructional approach. For example, while work with the written word is certainly important, staff members should also be encouraged to spend time also in developing conversations between children, with teachers and teacher aides guiding the discussion. The written word can also be supplemented with manipulative activities. For example, one teacher was observed using

fruit and other objects available in the room to illustrate ideas presented in the primer. This kind of supplementary activity should be strongly encouraged.

13. The items discussed above under program strengths were more in evidence in some classes than in others. Thus, in connection with future inservice programs, it might be helpful to identify those teachers who do well with a given instructional procedure and to use such people for putting on periodic demonstration classes for other teachers in the bilingual program. Demonstration classes could be followed by critique sessions.

APPENDIX B

RESPONSE OF PROJECT PERSONNEL
TO THE AUDIT TEAM REPORT

The Milwaukee Bilingual Education project director and evaluator acknowledge receipt of the final audit report. We note the ennumeration of bilingual program strengths and note the emphasis placed on its positive features.

This response is in reference to the recommendations for the modification and strengthening of program components. These recommendations are accepted as valid suggestions for attempting to achieve the goals of the bilingual program. The remainder of this document includes commentary on each recommendation and the feasibility of implementation.

1. The suggestion for an improved system for identifying potential program pupils at the junior high level is endorsed. Action was taken prior to the end of the 1970-1971 school year, when bilingual program teachers and student advisors made personal contacts with junior high schools. A qualified Spanish-American male counselor of Latin extraction has been requested by South Division High School.

2. Coordination of the high school program within the schools and with community institutions has been effected by three highly regarded individuals at South Division High School, D. Orozco, vice-principal, L. Lopez, social studies teacher, and J. Kopecky, principal. Workshops during which teachers met members of the Latin-American community were held for one day for South Division High School and for three days for principals of schools in the Spanish-American community. A Latin-American students' advisor coordinates the program at each high school. Two male students' advisors will be incorporated into the bilingual program as appropriate personnel become available. As of August 4, 1971, program coordination was taken over by a bilingual program coordinator.

3. The recommendation to acquire assistance in program management was implemented by the appointment of Noe Cavazos as program coordinator.

4. Efforts will be made to implement the inservice education of teachers and aides in the Science Curriculum Improvement Study (SCIS). Mr. Kenneth Dowling, State Department of Public Instruction science supervisor, will conduct a one-day preservice workshop on SCIS materials. Bilingual teachers and teachers' aides will be in attendance. Appropriate student instructional materials in Spanish are being developed through the Spanish Curriculum Development Center project in Dade County, Florida, for which Milwaukee has been selected as a field trial center.

   The increase of time devoted to teaching science will be evaluated jointly with the elementary supervisory staff and teachers in the bilingual program in order to determine possible modification of daily schedule.

   The behavioral objectives to be measured have been reduced to two at each level. The in-class test items have been listed in the "Bilingual Education Program, K-4" to serve as a guide for teachers to plan their daily lessons in order to help them achieve the behavioral objectives.

5. Bilingual classes are offered in other schools which request them. Allen-Field Elementary School, Kosciuszko Junior High School, and West Division are planning to implement bilingual classes. These programs would be individual in nature and would not be part of the Title VII bilingual program.

6. It is agreed that audio tapes would be beneficial as a data source for U.S. History and Personal Economics courses and that the tapes might be prepared at the media center being developed at Lincoln High School.

7-8. The possibility of funds from the National Consortia on Bilingual Education may provide an opportunity to obtain experts to prepare tapes in Spanish and to translate social studies materials into Spanish. Implementation of these recommendations would provide a valuable resource.

9. As teachers develop techniques in the teaching of economics and sociology, inservice training discussions will teach them more effective use of audio-visual equipment for student field trips. The expertise of consultants will be needed in order to help our teachers discover the best ways of using this equipment. Equipment will be ordered as required to fulfill needs identified by the teachers.

10. It is agreed that more emphasis needs to be placed on inservice training to develop ability in individual and small group instruction.

11. There is concurrence with the suggestion to expand the use of manipulative items in the teaching of elementary mathematics.

12. There is concurrence with the suggestion to use conversation and manipulative activities to supplement seat work with the written word.

13. Demonstrations of teaching methods will be used during the coming school year. The Spanish Curriculum Development Center consultant will participate in the preservice workshop. It is anticipated that the bilingual resource teacher at Vieau and the English as a Second Language teachers will also cooperate in giving demonstrations.